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ABSTRACT

This report summarizes three separate research studies stemming from a strike of secondary school teachers in metropolitan Toronto in 1975. It examines the effects of the strike on students' academic progress and achievement, as well as effects on retention rates and entry of students into the university and college. It also assesses how students' attitudes have been affected by the strike, with the purpose of guiding future efforts in collective bargaining. The first study examines secondary data on student marks and the usefulness of such data as a basis for inferences about real academic achievement. The second study analyzes attitudinal data collected by questionnaires and interviews from students. The final study reports on interviews with dropouts and compares the characteristics of those who left in the strike year with those who left in the preceding and following years. (Author/LD)

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THREE STUDIES OF THE EFFECTS OF TEACHERS' STRIKES

DAVID W. BRISON, Principal Investigator

I The Effects of Ontario Teachers' Strikes on Students – Student Achievement
MARK HOLMES, Principal Investigator

II The Effects of Ontario Teachers' Strikes on the Attitudes and Perceptions of Grades 12 and 13 Students
MICHAEL FULLAN and GLENN EASTABROOK, Principal Investigators

III The Effects of Ontario Teachers' Strikes on Students: Effects on Student Flow, Dropout and Transitions
CICELY WATSON and MOHINDRA GILL, Principal Investigators

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Preface

The point of origin for the studies contained in this report was the strike of secondary school teachers of Metropolitan Toronto in 1975. In January of 1976, as the Toronto teachers were being legislated back to work, the then Minister of Education, the Honourable Thomas Wells, announced that his Ministry was to fund a major study to examine the strike's effects.

> We will examine the effects of the strike on students' academic progress and achievement, as well as effects on retention rates and entry of students into university and college. We will also try to assess how students' attitudes have been affected by the strike. The results should be of assistance to us all in helping guide future actions and directions in the whole area of collective bargaining.

Three separate research studies were untertaken by faculty at the Ontario Institute for Studies in Education under a single contract with the Ministry of Education, Ontario. Under the same contract, there was a final report which summarized and integrated the three research projects. The reports of the three components are: (1) Mark Holmes, "The Effects of Ontario Teachers' Strikes on Students--Student Achievement"; (2) Michael Fullan and Glenn Eastabrook, "The Effects of Ontario Teachers' Strikes on the Attitudes and Perceptions of Grades 12 and 13 Students"; and (3) Cicely Watson and Mohindra Gill, "The Effects of Ontario Teachers' Strikes on Students: Effects on Student Flow, Dropout and Transitions." All three reports are reproduced in full in this document.

While the three studies are all concerned with the attempt to evaluate strike effects on students, each study focusses on a different aspect of this problem. "Student Achievement" is an examination of secondary data on student marks and of information predicated on marks (graduation diplomas; Ontario scholarships). This study also discusses the usefulness of such data as a basis for inferences about real academic achievement and suggests that they are limited in this respect. The study concludes that a strike effect on student marks is not discernible in the data it examines.

"Attitudes and Perceptions" analyses attitudinal data collected by questionnaire and interview techniques from a sample of students attending postsecondary institutions in 1976/77, most of whom had been in grade 13 during the strikes. This study had originally been planned to gather data in schools, but for reasons beyond its control was unable to do so. It thus reports on perceptions students held one and in some cases two years after their strike experiences. While the data from this study alone offer only a limited base for inferences about strike effects (the sample is restricted to a select group of high achievers attending postsecondary institutions and obtains ex post facto information), it achieved a very high response rate and obtained a wealth of responses to open-ended questions as well as information analysable in numerical terms. Its findings are most useful when compared with those from the third component study and are generally consistent with its conclusions.

"Student Flow, Dropout and Transitions" is primarily concerned with secondary data on movement in the education system. In addition, this study reports on interviews with dropouts and compares the characteristics of those who left in the strike year with those who left in the preceding and following years. The secondary data involve aggregate data on dropouts from grades 9 through 13 for both strike and no-strike boards and information taken from the application records of students who applied to postsecondary institutions. Comparisons between pre-strike, strike, and post-strike years and between strike boards and no-strike boards permit the isolation of changes which are idiosyncratic to strike boards in the strike year.

Readers interested in the complete exposition of these findings should refer directly to the reports contained here, as should those who want to examine the methodology, the data themselves, and their interpretation.

The final report of the research in its totality can be found in David W. Brison and Anthony Smith, The Effects of Ontario Teachers' Strikes on Students: Summary and Integration of Three Component Studies (Toronto: Ministry of Education, Ontario, 1978). Brison and Smith briefly sketch the history of the research projects, summarize the findings of each, and develop a theoretical framework for looking at the effects of strikes. Readers interested in a concise and more general discussion of strike effects are directed to this report.

DAVID W. BRISON

I

The Effects of Ontario Teachers' Strikes on Students – Student Achievement

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DORIS JANTZI, Research Staff

ABSTRACT

This study is concerned with the effects of recent Ontario teachers' strikes on student achievement. Two aspects of student achievement are examined - achievement as measured by objective tests, and achievement as reflected in teachers' marks.

Objective measures of achievement are important because they provide a general picture of the overall achievement of students in certain disciplines in given circumstances. The public is rightly interested in knowing what standards are achieved by students and whether or not those standards are affected by teachers' strikes. If they are not affected, they are understandably interested in knowing why they are not. Teachers may well feel they are in a "heads you win, tails we lose situation." If a negative effect of strikes on achievement is documented, teachers can be accused by the press of sacrificing students' educational interests to their own material gain. If no such negative effect is documented, teachers can be accused of wasting the taxpayers' money when it does not turn out to make any difference whether or not students actually receive instruction.

It is probably for that reason that we were not permitted access to Ministry data, as originally planned, data that would have helped determine whether the 1975-76 strikes influenced students' achievement. Instead, we were limited to a study of the literature which helped the development of a set of hypotheses concerning the relationship between loss of instructional time and student achievement. While it must be taken as a truism that one will learn nothing if one is not taught, and if one is taught for a longer period of time one is apt to learn more, the actual relationship between instructional time and achievement is not a simple one.

We suggest that a number of factors may interfere with the simple, linear relationship between instructional time and achievement. In the first place,

norms of achievement are sometimes developed whereby teachers, parents, even students learn what is normal in a given subject at a given grade, and work to that level irrespective of the time available. Secondly, measurement of effects of change in instructional time is difficult if the tests used are very general ones of things learned over long periods of time. This is particularly so if there are many factors affecting the many outcomes, such as the students' intelligence and cultural background. The more variation there is in achievement levels for other reasons, the more difficult it becomes to identify the specific effect of strikes. Thirdly, some objectives are much more teachable than others, so the achievement of those objectives is more likely to be influenced by time than others. Thus a strike will have a greater effect on swimming proficiency than on the development of morality. In sum, it is unlikely that a simple comparison of overall achievement in general tests would show any variation from strike to non-strike years. The reason would not be that instruction does not affect students. It would be for a number of reasons, relating closely to the many things other than time that affect students' performance on tests. Only if achievement was regularly monitored, and if careful assessment was made of samples of students and their individual characteristics, would it be possible to delineate clearly the effects of interruption in the instructional program.

It is perhaps misleading to refer to teachers' marks as being indicators of achievement. There is no reason to believe that fluctuations in general levels of marks are closely related to general levels of achievement. Nevertheless, school marks are of great importance to students as they determine, to a considerable degree, their future life chances. For the individual student, the level of marks received is probably more important than the objectively determined level of achievement. Generally speaking, there appears to be no difference in marks between the strike and non-strike years. Many different subjects, in different schools, in different grade levels, were examined and consistently there was no significant difference between strike and non-strike years. The numbers of Ontario scholars in strike and non-strike years were examined and again no difference was found. The numbers and proportions (of those enrolled) of students graduating from grade 12 were compared between strike and non-strike years. The numbers of credits granted as a proportion of enrolments at the beginning of the year were similarly compared. Once again, consistently, there were no differences between strike and non-strike years. The one area where a difference was observed, particularly in Metropolitan Toronto, was in the number of grade 13 graduates (SSHGD). Although not statistically significant, there were fewer graduates in 1976, particularly noticeable in the case of females. The statistical evidence alone cannot support the hypothesis that there was a reduction in grade 13 graduates as a result of the teachers' strike, but that is a possibility. This outcome must be considered in the light of other portions of the research project.

Although there is no significant change in the marking patterns of secondary teachers in Ontario in strike years, that cannot be interpreted as meaning there is no change in student achievement. There is no reason to believe that teachers' marks would increase or decline as the standards of achievement increase or decline. Quite the reverse, as marks increased to permit increasing proportions of students to qualify as Ontario scholars after the abolition of grade 13 examinations, there is no evidence of a concomitant improvement in achievement.

In sum, it is unlikely that significant differences (between strike and non-strike years) in performance on objective tests would have been determined if that part of the research had been carried out. Few observable differences in the levels of rewards provided by teachers were noted, but that does not indicate that there was no change in achievement levels. It may well be that strikes have some effect on the achievement of pupils. One would expect those effects in areas where the objectives are clearly teachable, and where the interruption in instruction is a significant proportion of the time allocated for the achievement of the objectives. If such possible effects are to be precisely ascertained, it would be necessary for research to be carried out on a continuing basis. Achievement levels of students will have to be monitored in a variety of subjects and the many other factors that affect achievement will also have to be simultaneously examined.

FOREWORD

This research was carried out on a politically sensitive topic. We regret the circumstances that prevented us from conducting objective achievement tests to see if there were any changes between strike and non-strike years. Nevertheless, we recognize the prevailing political atmosphere is one that makes such research difficult.

We would like to thank most sincerely the many school systems, Ministry officials, and individuals that did cooperate with us. In fact, although decisions were made by organizations that limited the scope of the research, we were met by unfailing cooperation and courtesy from all the individuals with whom we came in touch.

We should also like to thank Betty Penistan particularly. She has not only had responsibility for most of the typing involved but she has also had many additional interruptions caused by this study. Thanks go also to Tony Smith who provided incisive insight on the formulation of the hypotheses.

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CHAPTER 1 INTRODUCTION

This is one of three parts of a research report on the effects of teachers' strikes in Ontario. This portion concerns itself with effects on student achievement. Metropolitan Toronto is the major focus of the study. It was the long strike in the winter of 1975/76 in Toronto that provided the impetus for the research contract and it was that strike that evoked most public concern. Originally the research was to be confined to Metropolitan Toronto, but the scope was later extended to Ontario generally, with the emphasis remaining on Toronto.

The report begins with a consideration of the problem - what do we mean when we talk about effects of strikes on achievement? What is achievement? Possible approaches to the problem are outlined and the difficulties that led to the abandonment of one of the most promising approached are described.

The report continues with the development of hypotheses in the light of previous research. Particular attention is paid to the research on the relationship between instructional time in school and students' achievement. The problem of teachers' marks is also examined.

The report continues with the findings and suggests some possible explanations for them. Finally the report concludes with a short overview.

The Problem

This portion [illegible] the research sets out to answer the question - what effect do strikes by Ontario teachers have on the achievement of students? Achievement is defined for the purposes of this study as academic progress, which is reflected in students' marks, and in enhanced knowledge and understanding that could be measured by objective, external tests.

At first sight it might appear that these two measures, marks and test scores, are simply different observations of the same phenomenon. We know that, in general, students who perform well on objective tests tend to get good marks from their teachers. Both types of observation discriminate among individuals, and, to some degree, the discrimination appears to be based on similar criteria. A very important distinction must be made between the two types of observation. A teacher's marks cluster around the standard that is idiosyncratic to that teacher. Objective test scores cluster around the standard or norm that is idiosyncratic to that test. Thus while both measures discriminate among individuals, different marks from different teachers also result partly from differences among teachers. An objective test applies the same criteria whenever it is given.Teachers in different classrooms have very different criteria.

How is that relevant to the problem? Quite simply, if we compare objective test results in school years of 185 days with the results in a school year of 150 days we can see if there is a significant difference. If other factors have apparently remained the same it would be reasonable to hypothesize that any significant difference in measured achievement is caused by the change in instructional time. That hypothesis would gain support if it could be shown that the scores of similar students not affected by the change in instructional time were not significantly different for the year in question. Conversely, if the change in instructional time (resulting from the teachers' strike) is not related to change in student scores on objective tests, then one can reasonably hypothesize that, in certain circumstances, loss of instructional time does not affect student achievement.

On the other hand, relationships between school marks and instructional time cannot be so readily interpreted in terms of objective achievement. If a reduction in school marks is related to a reduction in instructional time we may, in reasonable circumstances, hypothesize that a loss of instructional time results in lower school marks but we cannot hypothesize that there is any lowering in achievement. School marks reflect the standards of teachers and we have no way of knowing to what extent the standards fluctuate according to circumstances.

So, it may be reasonably asked - why examine school marks if conclusions about objective achievement cannot be made from them? The answer is that, in Ontario, school marks are of first importance as arbiters of students' progress. While Quebec has provincially administered examinations, while most of Europe uses a variety of external, nationwide examinations, and the USA relies heavily on standardized test scores of various kinds, Ontario relies almost entirely on school marks as measures of students' progress, even at the end of high school when other jurisdictions rely more heavily on objective, external criteria. Thus, in a very real way, as far as the individual student is concerned, marks in school are of more critical importance than any measure of actual growth in skills, knowledge and understanding. It is marks that determine the student's academic standing among peers. It is marks that determine progress through school. It is marks that determine, in large part, access to further education and careers. Therefore it is a matter of some moment to individual students and to their parents if teachers' strikes influence the level of school marks.

Thus, there are two types of observation of student achievement that can be examined. The first is an objective measure that is being used on a regular basis in schools affected by strikes, and also, one hopes schools unaffected by strikes. The second is the teachers' assessments of students. It should not be assumed that, because these two measures are correlated, the change in one type of measure will cause, or even be matched by, a comparable change by the other. If a typical correlation between objective test results and school marks is .5 (Holmes, 1971a), then the one variable explains only 25% of the variance in the other. Teachers' marks obviously reflect many other factors as well as the achievement measured by objective tests.

The two types of observation are independently of importance - but we should not necessarily expect any concurrence between the two sets of observations in relation to loss of instructional time. The relationship between loss of instructional time and objectively measured achievement could be the same as or the opposite of the relationship between the loss of instructional time and school marks.

Objective Measures of Achievement

We faced what turned out to be an insuperable problem in a search for objective criteria that could be used to measure student achievement in Ontario secondary schools affected by strikes in recent years. The fundamental problem is that there are no base-line data with which comparisons can be made. It has already been pointed out that most educational jurisdictions outside Canada use some form of objective criteria for measuring student progress. In Ontario standardized tests are used by many jurisdictions at the elementary level but are virtually unknown at the secondary level. Certainly, studies of student achievement in Ontario have been made but not in such a way that valid comparisons can be made with student achievement in 1976 within a particular board's jurisdiction.

Given the paucity of data, it was planned to attempt two ways of arriving indirectly at objective assessments. First, although there is no external testing program in Ontario, the Ministry of Education and the Ministry of Colleges and Universities did fund a project which had the gathering of achievement data at the grade 12 and 13 levels as one of its components. This project is referred to as the Interface Project (1977). Schools in Metropolitan Toronto, which were affected by a serious strike in the winter of 1976, and schools outside Toronto not affected by the strike both participated in the study. A simple comparison of the achievement scores of the two groups of schools (strike affected and non-strike affected) would reveal nothing. We would have had no way of knowing whether the Metropolitan Toronto sample would score high or low in non-strike conditions. However, it was felt that there is a substantial difference between tests of written English and English usage on the one hand and tests of mathematics and physics on the other. While competence in the former areas is clearly developed over a long period of time, with the final year's experience being of marginal, incidental importance, competence in the latter disciplines, associated closely with the grade 13 curriculum, can be seen as resulting much more directly from the grade 13 experience - providing the test is so constructed. It was therefore hypothesized that any negative effects of strikes on student achievement would be much greater in mathematics and physics than in English. If Metropolitan Toronto students performed worse in mathematics and physics than in English, relative to students elsewhere in the province, one possible explanation would be that they had been affected by the strike. It was intended to follow up the hypothesis by replicating the tests concerned with the Metropolitan Toronto sample in the spring of 1977. If the hypothesis was correct, one would have anticipated that the different levels of achievement, discovered in 1976, would have disappeared in 1977.

Unfortunately, the Ontario Secondary School Teachers' Federation was unwilling to cooperate with the strike research. Concern was expressed that research findings could be used politically to the disadvantage of teachers. If negative effects of teachers' strikes were reported, teachers might receive additional opprobrium for having harmed young people. If no negative effects were reported, the public might question the worthwhileness of educational expenditures. Doubtless, the decision was influenced by the feeling on the part of teachers that the findings would be unlikely to receive unbiased reporting from Toronto newspapers. Toronto teachers were generally less willing to cooperate than teachers elsewhere in the province.

The Ministry of Education subsequently stipulated that no Interface data could be used for the current study. In fact, it transpired that teachers had expressed some reluctance to participate in the Interface study, partly from fear that achievement results would be used to measure the effects of teachers' strikes. They had apparently been assured that the data would not be put to such use.

This part of the research had to be abandoned although is was an important part of the original design. No other base-line data of any kind were available in Ontario at the secondary level.

The Interface studies had been our principal hope for supply of usable objective data on the provincial level. Nevertheless, it was also planned to investigate to see if any Metropolitan Toronto board, or even school, had used common tests over a period of years, including the strike year, 1976. The North York Board of Education did not become involved with the study, presumably as a result of the teachers' lack of enthusiasm. To the best of our knowledge, no board of education in Metropolitan Toronto (including, we believe, North York, of which we have only indirect knowledge) has administered in successive years (including 1976) any common measure of achievement to all secondary schools (at a given grade level) or even to all students of a given grade level within a school.

The University of Waterloo runs annual mathematics contests for secondary school students. Although the test is not standardized, and is not precisely equivalent from year to year, it is an external test given to a large number of high achieving students in the province of Ontario. It is administered every spring. A request was made to the organizers of the contest for the use of their data, which would show the relative success of strike-affected and unaffected youngsters in a competition over several years. The request was refused on the grounds that high school teachers would not want to think that their voluntary participation in the contest would be put to the purpose of analyzing the effects of teachers' strikes. One interesting note in this respect is that the organizers observed that there had already been a drop in participation by strike-affected schools. Obviously the strike did affect the opportunities of some young people to compete in mathematics in a wider field. If external competition promotes higher achievement, reduced participation would eventually affect the achievement level of the outstanding students who take part in the contest. Ironically, the organizers felt (probably correctly) that our use of their data would make strike affected schools more likely to withdraw from future competitions. In this small way at least, the measurement of the effect of strikes exacerbates the effect.

Students' Marks

Students' marks can be looked at in a number of ways. Most simply, marks can be collated for given schools over a number of years and compared with the marks in a strike year. We must caution that marks should be looked at in terms of their immediate effect on students, and not viewed as measures of absolute achievement. This point will be discussed more fully in Chapter III.

One important effect of school marks is the selection of Ontario scholars, whose average in six grade 13 subjects equals at least 80%. A check was made on Ontario scholars over the four years from 1973 to 1976 to see if there were fluctuations coincident with teachers' strikes. A refinement of this research shows Ontario scholars as a proportion of the enrolment in grade 13 in the previous September.

Grade 13 consists of a rather select group of students. It was therefore decided to look at graduation diplomas given at the end of grade 12 as well as graduation diplomas given in grade 13. Finally, consideration was given to the number of credits given as compared with the enrolment so that we could check on the possibility that students might have dropped courses (or dropped out of school altogether). This portion of the research is not concerned with the drop-out question but we did want to make sure that an actual drop in student performance was not concealed by a high drop-out rate among inferior students.

In short, we set out to answer the following questions:

Is there a relationship between school marks in various subjects and teachers' strikes?

Do more or fewer students earn Ontario scholarships in years when teachers strike?

Do more or fewer students earn secondary school graduation diplomas and secondary school honor graduation diplomas (grade 12 and grade 13) in years when teachers strike?

Do more or fewer students earn credits in particular subjects in years when teachers strike?

CHAPTER 2 ACHIEVEMENT AND INSTRUCTIONAL TIME: SOME HYPOTHESES

The basic question being researched is - to what extent is there a relationship between the amount of time in school and achievement? We are concerned with a particular kind of interruption in instructional time. Research evidence on this vital question is most rudimentary. Conventional wisdom has generally suggested that there is a relationship, if a somewhat tenuous one, between instructional time and achievement. Thirteen years of school presumably provide a higher standard than eleven. Two years of physics are presumably better than one. Seven periods of English a week are more effective than five. The student with perfect attendance learns more than the one who misses 50% of the instructional days. One learns more in 200 days than in 100. Wiley (1976) states the argument succinctly. "It is clear that if a child does not go to school at all, he will not directly benefit from schooling. If a child goes to school every day for a full school year, he will achieve the maximum benefit from that schooling, other circumstances being equal. If he attends school less than the full year but more than not at all, the benefits he derives from schooling should be intermediate. That is, the quantity of schooling should be a major determinant of school outcomes." (p.227)

Before assuming that that is a self-evident truth we should examine the proposition more closely. Is it really true that human beings cannot be affected by processes to which they are not directly subject? Let us examine one or two analogies.

One week, three of Mr. Smith's neighbors received tickets on their way to work for failing to come to a complete halt at a stop sign posted at the intersection of their quiet crescent with a secondary highway. May not Mr. Smith's behavior be affected? Let us push the analogy a little further. Suppose that Mr. Smith had just moved to Ontario from Montreal, where he had become accustomed to slowing down rather than stopping at stop signs. Is it not possible that he would learn from the behavior of his neighbors, even if he did not know that they had received tickets?

There is conflicting evidence on the effect of televised violence on the behavior of individuals. Most studies claim a causal link, while others deny it. Is it not at least possible that televised violence helps (together with violence in speech, print and action) to raise the norms of violence in society - thus affecting those who don't watch television as well as those who do? To put it simply, depriving one's child of access to televised violence does not deprive the child of access to violence from friends and neighbors, who may themselves be influenced by television.

Returning to education, is it not possible that formal schooling establishes norms of learning in the society at large so that even children who never attend school at all achieve some of the approved objectives? If so, those norms may be at least partially operative in the case of children who never attend school at all. Most ten year old Canadians read. One might guess that Canadian parents living in very isolated places far from Canada might try to ensure that their ten year olds could read, particularly if they are planning on returning to Canada. If this seems far fetched, consider the daily experience of any classroom teacher. Tina is away from school for three weeks with measles. At the end of the period she has kept up with the class and is exactly at the point she would have been had she not been sick. John, by contrast, misses one day and fails to complete the previous day's assignments, misses the one day's work, and fails to prepare for the following day - essentially losing the best of three days. Is the amount of time lost a potent variable in directly explaining differences in achievement levels?

One of our children attended a new French immersion program in the province of Quebec. The grade one teacher, herself francophone, constantly compared the class with the francophone first grade down the hall, and frequently administered identical tests. It is not surprising that the results of standardized tests showed that the anglophone immersion group reached the same average reading level in French as the francophones. In this case, children were driven to achieve a standard derived from norms of quite different pupils in a period of time much less than one would expect for such achievement. Sometimes, work may contract, or expand, to take the time available.

What is being proposed is that the situation is not as simple as Wiley would suggest. If nobody in an isolated country receives formal education, then formal education will have no effects in that country - that is not denied. It does not follow that, if one child in a highly educated country is deprived of education for a period of time, the child will suffer a commensurate, or even any, loss of skill development.

Two hypotheses may be drawn from this argument:

1. In a closed system, if there is no formal education, there will be no effects of formal education. In an isolated country with one year of formal education, the outcomes of schooling will be less substantial than they will be in the case of an isolated country with ten years of formal education. There is a general positive relationship between amount of instruction and amount of learning.
2. As formal education becomes a part of the social context, norms of learning (such as skill levels appropriate for a given grade or age) are accepted by teachers and parents, and are thus transmitted to pupils

in the forms of expectations and demands. Therefore, fluctuations in the amount of instructional time will not have a commensurate effect on cognitive and affective outcomes unless or until new norms are developed and accepted.

Husén (1972) summarized the research evidence and challenged the pedagogical folklore that a 50% increase in the amount of schooling results in a corresponding increase in student achievement. He describes research in Norway where two parallel groups of pupils were set up. One group of twelve to fourteen year olds received half-time instruction (but more homework) than the other, yet proved to be only slightly inferior in mastering the basic skills (p.33). This is at least compatible with the hypothesis that an achievement norm is established, towards which teachers and pupils work irrespective of the time available. Husén also notes that the International Achievement Studies have generally failed to find any consistent relationship between the age of starting school and academic achievement (p.34). In mathematics, starting at age six appears to be slightly advantageous as compared with starting at age five or seven (p.33). Combining various measures of instructional time in mathematics, 3% of the total variance in the achievement of thirteen year olds is explained (p.33). A word of caution must be entered even in terms of that 3%. Just because there is a slight relationship (internationally) between instructional time and achievement does not mean either that there is a relationship within a society, nor does it mean that increasing instructional time will necessarily improve achievement. Relationships are not necessarily causal. In this case there is a plausible explanation, other than cause and effect, for the relationship. It is possible that schools in countries that give more time to mathematics value mathematics more highly, and it is possible that the high value causes the high achievement rather than the allocation of time, which is itself merely another reflection of the value placed on mathematics.

Gibson (1965) compared the academic achievement of elementary pupils in the USA with that of children in the British Isles. The British children generally had started school at age five, and the Americans at age six. The British children did in fact show early gains in skills, but were overtaken by the Americans by sixth grade. It should be noted that high achievers did better in Britain while average children did better in the USA. Therefore part of the overall American gains might be attributable to the selectivity found in the British system at that time. There are more average than high achievers. This research does not conclusively prove that age of starting school is irrelevant but it helps to bear out the expectation that we should not anticipate a simple linear relationship between instructional time and achievement.

Applying this to the Canadian situation, we find no studies that compare inter-provincial achievement while isolating the time-in-school variables. Nevertheless, it does appear that instruction is organized to take the time available. For example, Quebec has eleven years of elementary and secondary education (excluding kindergarten), New Brunswick twelve years (but no kindergarten),and Ontario thirteen years (excluding kindergarten). The student planning to take science at the post-secondary level would typically take two years of physics and two years of chemistry in all three systems. While no suggestion is made that thirteen years in one province is equivalent to eleven in another, it would be reasonable to infer that the competence in science of students who have had four physics and chemistry courses by the end of grade eleven would be greater than those who have had two, which in turn would be greater than those who have had only one. Are we saying then that changes in numbers of years of schooling have little effect but numbers of courses on a specific topic within a limited period of time have a greater effect?

The answer to that question is a guarded yes. Within reasonable limits, age of beginning school has probably little or no effect on subsequent achievement. For one thing, children who begin later probably learn faster. Beyond that, instruction does not necessarily increase competence. Obviously that is true if the instruction bears no relation to the objective being measured. Even if instruction is related to the objective, twelve years of instruction may not be measurably more effective than ten. For example, honesty is taught in school rather indirectly, and possibly with limited effect. If the total effect of instruction towards an objective is limited we should not expect much change in total achievement as a result of incremental changes in time. Perhaps the threshold of effectiveness is reached very quickly, or perhaps the increments of learning are cumulative but very gradual.

One reason why instruction may be ineffective even if it is nominally related to the objectives is that the instruction may be indirect rather than direct. The terms direct and indirect are not used here to describe narrowly specific pedagogical methodologies. Exposing children to plentiful reading, and providing them with a graded, phonic program in reading are both direct instructional methods. On the other hand, if a student in grade 9 takes a literature course that, in practice, does not even require a single reading of the texts, that instruction is considered indirect, even though improved reading skills may be listed as one of the course objectives. Direct instruction is when specific activities are designed so that the objectives can reasonably be assumed to be thereby achieved. Indirect instruction is when there is no obvious link between the activity and the objectives. Thus if an objective is taught directly for five years and indirectly for seven years, one would not expect much incremental change in achievement by increasing or decreasing the period of indirect instruction.

Thus when we talk about the effect of instructional time on achievement, we must be more specific about the way the time is directed toward achieving the particular objective. At its simplest, adding two years of school is not going to improve achievement in physics if no physics is taught in those two years.

Coleman (1966) and Jencks (1972) concluded that school factors generally have little effect on student achievement compared with home background factors. Two comments should be made on their conclusion. First, their measures of achievement were very general - verbal ability, basic mathematics, general knowledge, and reading skills. High school courses often do not give achievement of those objectives very high priority. It is also reasonable to assume that their objectives are partly reached outside the school - through general reading, television, social exchange. Second, the home background variables are so badly defined and so positively correlated with school variables that it would be surprising indeed if the school variable independently contributed anything substantive to the explanation of variance in the dependent variables (the generalized ability and achievement measures). An example of this problem is that Coleman uses parents' educational desires as one of the background factors (p.298). We would certainly expect those desires to be related to student achievement. What we do not know is to what extent they are a result of achievement rather than the cause; and to what extent parents' expectations are in fact influenced by school quality. Presumably, parental expectations increase if children do well in school.

Nevertheless, although we would strongly challenge the inference sometimes made from Coleman's research that school factors generally do not have much effect on student achievement, we would still accept that differences in schools within a single culture are much less important determinants of general measures of basic academic achievement than are individual student factors such as intelligence and home cultural background.

In summary, three basic reasons can be given for Coleman's failure to find much relationship between school factors and achievement. First, there is a problem that is partly one of measurement. He tended to measure the lowest common denominators of school learning, many of which are not taught directly, particularly at the secondary level. Second, his measures of school factors are badly confused with home factors. Third, the effects of intelligence and home environment on general measures of academic performance and ability are so great that they are likely to swamp effects of schools (including the effect of amount of instructional time).

This leads us to the third hypothesis. A reduction in the instructional time will not have a measurable effect on general outcomes of education that are achieved over a long period of time, particularly where some combination of the following factors is present: the objectives are achieved outside as well as inside the school; the objectives are measured in very general ways; instruction towards the objectives is indirect; individual differences in intelligence and cultural background have much greater effect on achievement than differences in instruction.

In Ontario, teachers' strikes have taken place at the secondary level (grades 9 to 13), precisely at the levels where the Coleman and Jencks (p.89) studies show school differences likely to be of least significance. The explanation of that low level of significance would appear to be relatively straightforward. First, most high school courses are not directed primarily towards those general objectives. Second, the general skills measured by the tests used are built up over a long period of time in a number of ways (inside and outside the school). Interruption of schooling of less than a year is unlikely to have a major effect on the development of those general skills unless there are other additional circumstances (such as a change in society's values with respect to educational achievement).

The preceding statements must be considered carefully in the context of this report. First, we are assuming existence of local, provincial and national norms of achievement that help to control achievement levels. Second, we are not saying that formal education does not make any difference to young people beyond a certain age. Sewell and Hauser (1975) concluded from a longitudinal study of young males in Wisconsin that formal education is vital in mediating the effects of home background and intelligence on future education and future earnings. In other words, while educational achievement is fairly well predicted by a combination of home background and intelligence factors, education is itself necessary for success. The fact that intelligent people from favorable home backgrounds profit more from schooling than do unintelligent people from unfavorable backgrounds does not in any way suggest that the same effects will occur without education. The point is emphasized by Blau and Duncan (1967) who demonstrate the considerable social mobility characteristic of the USA and other western societies, a mobility which is to a large extent dependent on formal education.

We suggest then that general effects of education are built up over a long period of time by school and societal factors and are unlikely to be particularly affected by interference with formal education.

Interference at the elementary level will probably have a greater immediate, but probably temporary, effect on the development of academic skills. Jencks (1972, p.87) refers to findings that, when schools in Prince Edward County in the southern USA were closed to avoid integration, black children who had not attended school for several years had considerably lower achievement levels than other black children of their age. New York City schools were closed, Jencks reports, for several months in the fall of 1968 as a result of a strike, and the city reported a drop in test scores the following spring. Jencks also notes that the assumption is made that reading scores do not improve very much in the summer when children are not in school. He suggests that black children, presumably disadvantaged, suffer more from a break in school than white children. On the other hand, Lytle and Yaness (1973) report no relationship between time in school and achievement test improvements for seventh and eighth grade students affected by an eight-week strike in Philadelphia. Unfortunately, we do not know what gains were normally made over the year.

In sum, there is a little evidence, somewhat tenuous, that instructional time is a more potent variable at the elementary than at the secondary level. In addition, hypothesis 3 lends support to that idea. Measures of elementary level achievement may well be more closely associated with school objectives simply because there has been less time for development of divergent programs (for example, there are usually no course options at the elementary level). Instruction in the elementary level is more likely to be direct, and more likely to relate to the same objectives as instruction in other elementary schools.

Therefore, the fourth hypothesis is that the lower the grade level, the smaller the amount of change in instructional time needed to produce a measurable difference in outcomes of schooling.

We are dealing with a paradox. The amount of time in instruction appears not to be related to achievement in any simple way. Yet, at the same time, if students are not taught a specific skill - reading, typing, computation - they are unlikely to learn it. For example, the International Achievement Studies (Postlethwaite, 1975) consistently found that opportunity to learn is an important predictor of student achievement - that is to say, if teachers say they have taught something, it is more likely that pupils prove to have learned it (p.3; p.20).

The paradox may be explicable in three ways. First, the changes in total amount of schooling tend not to be very great. At one extreme, we might look at the effects of missing ten weeks of school from ten or so years of education. It would be surprising if the effect were very great. Beginning school a year earlier than usual is a comparatively small increment to a ten or twelve year process, even overlooking the probability that children do not learn very fast when they are only five years of age. Second, as we have said, measures of schooling are often very general. So that they can be fair to schools with varying programs, they tend to emphasize the common denominators of learning, which a reduction in instructional time is least likely to affect. Third, some objectives are more easily specified than others and therefore changes in their attainment will be more easily measured.

The next hypothesis is concerned with the specifiability of objectives - it is concerned with the nature of the objective, the nature of what is being learned. A distinction must be drawn between this hypothesis and earlier ones. We began with a general hypothesis that, within a closed system, instruction is directly related to learning. We went on to note that complex modern societies are not closed systems and that therefore varying pressures are brought to bear on learning in school. The effect of these external and internal influences is to moderate the effect of instructional time.

It has also been suggested that the effect of instructional time will be moderated in certain circumstances that tend to be closely connected - learning takes place outside the school, instruction within the school is indirect, student background is particularly significant in the achievement of the objective.

The objectives of education are now looked at from a slightly different point of view. We are not concerned here with the difficulties of measurement, with the type of teaching or with the students' background. Instead we are concerned with the clarity and specifiability of the objective itself. To take an extreme example, competence in typing is a very clear, understandable and specifiable objective (whether or not it is actually specified in writing). On the other hand, an understanding of the nature of history is a much less clear, much less specifiable, and much less easily understood objective, however much may be written about it.

Therefore, it is suggested that a reduction in instructional time will have a greater effect on competence in typing than on the understanding of history. The reader will object that, if this assertion is true, it is explicable in terms of the third hypothesis. Typing skills are more likely to be taught directly, they are more easily measured, and they are less affected by external circumstances. Without denying those probabilities, it is additionally being suggested that typing skills are essentially different from historical skills (which is one reason why they are more likely to be taught directly).

Thus, if we imagine a situation where typing and history are taught indirectly (to achieve typing skills students are encouraged to type their projects for other courses), where the testing instruments are poor, and where the range of student ability and interest is great, we are suggesting that a major interruption in instructional time (perhaps two years) might still affect typing skills but not competence in the understanding of the nature of history. Conversely and more significantly, if we postulate a situation where both typing and history are taught directly, where the test instruments are closely related to the objectives, and where there is little range in the ability and background of students, we would again suggest that typing would be more affected than history by an interference in instructional time. Most people know what a typing skill is. Fewer know what is meant by an understanding of history.

The fifth hypothesis then is that instructional time will have a much greater effect on objectives that are clearly specifiable and easily understandable than on objectives that are less specifiable and understandable.

Simply reduced, this hypothesis says that schools teach simple, straightforward things more effectively than they do complex, esoteric things.

The conclusions being drawn in this exegesis are considerably more conservative than those put forth by Wiley (1976) and Wiley and Harnischfeger (1974). Those two research reports support a claim that instructional time is a potent predictor of learning. Wiley argues that length of school year, attendance in school, and amount of time provided to a subject are all variables expressing the amount of time in school that help explain differences in achievement. While it is premature to suggest that these claims are invalid, it must be pointed out that they are inadequately supported. No one would deny the relationship between student attendance and student achievement, but it would be presumptuous to assume that poor attendance causes poor achievement - the reverse is equally likely to be true. More important still, both poor attendance and poor achievement are possibly caused by such factors as intelligence, cultural background and even school quality. Similarly, length of the school year may be related to achievement - but it may also be related to the wealth of the community. Neither research report (one based on Coleman's data, the other on Illinois school systems) controls pupils' social backgrounds and intelligence - the two factors that we know are the best predictors of student achievement. The position taken here is that the effects of instructional time are greatly mitigated, even vitiated, by other factors.

Other Influences on Student Achievement

Before leaving the relationship between instructional time and achievement, it would be remiss not to comment further on why it is so difficult to establish a relationship between the two variables. The reader may well argue like this, "I can see that one would not expect twice the achievement from twice the time. I can see that some kinds of interference in some circumstances would have more effect than others. I can see that some objectives would be more affected than others. But you are not arguing that time is irrelevant, so why can't we simply discover the difference, however small, that time makes in a particular instance? Why does the Lytle and Yaness (1973) study show no effect at all?"

We have already touched on part of the answer to that question Coleman (1966), Jencks (1972), Sewell and Hauser (1975) and many other researchers have clearly established that intelligence(however defined) and cultural background explain more of the variance in achievement than could any combination of school variables. If we could just hold those factors constant, we would be better able to measure the effects of changes in instructional time. The definition and measurement of those factors are difficult. Worse still, the other factors are minor in comparison with those central ones. If you blow down a straw into a glass of water, you can create quite an effect - but try blowing a vast ocean. Changing the instructional time of children is more like blowing on an ocean than blowing down a straw.

But intelligence and cultural background are not the only factors that influence achievement. There are other factors too that have some importance and they affect the context in which instructional time must be placed.

The quality of the individual teacher undoubtedly affects students' achievement. Over years, this probably evens out as students tend to receive a fairly random selection of teachers from their schools.

Nevertheless, some schools probably do have better quality teaching than others on the average, and the quality may vary from year to year. Teacher quality is notoriously difficult to measure. Summers and Wolfe (1975) report that student achievement in Philadelphia is related to the type of college where teachers were educated, when student background factors are controlled. A comparable finding is reported by Postlethwaite (1975, p.3) where university-trained teachers prove more effective in teaching mathematics. One possible explanation is that more intelligent and more knowledgeable people make more effective teachers. Certainly there is no reason to believe that simply lengthening the training time of teachers would increase student achievement. In any event, even though it is difficult to identify precisely the qualities that make good teachers, even though teacher quality evens out over time, the fact remains that within a given year at school the amount of learning that takes place is affected by the quality of the teacher. That factor increases the variance of student achievement and makes it more difficult to uncover the effects of changes in instructional time.

McDill, Meyers and Rigsby (1967) report that the academic atmosphere of the school (the degree to which teachers and pupils have developed norms approving high standards of achievement) predicts student achievement. Bennett (1976) suggests that a structured approach to teaching basic skills is more effective with elementary pupils. That suggestion is supported by Traub, Weiss and Fisher (1976) for Ontario, but only in the case of a population of disadvantaged children.

Another controversial suggestion is that the background characteristics of the student body as a whole influence student achievement, quite independently of the individual's own background. Summers and Wolfe (1975) reaffirmed Coleman's controversial finding (1966) that black students do better in racially balanced schools. Holmes (1971b)reported that pupils' average social status is much more positively correlated with achievement among grade 9 students in New Brunswick than is the case with, for example, teachers' attitudes or teachers' training.

Coleman (1976) suggested that students' attitudes, self-concept, and sense of control of their destiny might be causes of differences in achievement. This is a difficult topic. It seems quite possible that the relationship may work the other way - children who do well come to feel they have influence on their lives. Alternatively, both high achievement and self-concept may be caused by other factors, such as personality. Jackson (1967, p.15) noted that, "An impressive amount of evidence has accumulated showing that scholastic success and attitudes towards school are typically unrelated to each other." One other factor to which we have already referred is opportunity to learn. If teachers do not teach a particular topic, students are less likely to learn it.

Problem of Relating Instructional Time to Achievement

In sum, there is persuasive (if not conclusive) evidence that achievement is influenced by a number of school factors independent of pupils' cultural background and intelligence. These factors probably include: teacher qualtiy; school academic atmosphere; degree of structure or formality in teaching; cultural background characteristics of the student body; and opportunity to learn.

If we add these factors to individual intelligence and cultural background it is easy to see that the problem of establishing causes of student achievement is a complex one. In a scientific experiment, it is usually necessary when one examines the relationship between two variables to hold the other variables constant. In educational research, that is hardly ever possible.

Let us suppose that as much as 5% of the variance in student achievement is normally explained by instructional time (including length of school year, attendance, amount of time given to a particular topic). That is a generous estimate. Working from that estimate, would we expect an average 5% decline in objective measures of student achievement as a result of a prolonged teachers' strike? Would the effect of a three month teachers' strike be as potent as the combination of the other instructional time factors? Probably not. Even if we assume that poor attendance causes poor achievement (rather than the other way around). it is possible that poor attendance causes poor achievement particularly in that type of student subject to poor attendance - that there is interaction between culture and personality factors on the one hand and poor attendance on the other. It is most unlikely, even with all other factors controlled, that the achievement of students deprived of 50 or so instructional days as a result of a strike would be reduced comparably with the achievement of the student who misses the same number of instructional days for other factors (with the possible exception of genuine sickness). In other words, even if we assume that a large part of the relationship between poor attendance and achievement is in fact caused directly by poor attendance we cannot extrapolate the same causal effects in the case of a teachers' strike. The difference is that all students, including the highly motivated students, are affected by a teachers' strike whereas poor attendance is characteristic of particular types of students.

When one adds to the rather slight effect of instructional time as a variable the complex of other variables that influence student achievement it can be seen how unlikely it is that a change in just one minor variable will provide measurable differences in student achievement. We therefore hypothesize that, particularly at the secondary level, there will not be measurable changes in achievement test results as a result of teachers' strikes unless other important variables can be controlled. If one were to measure achievement in strike and non-strike years for a particular board it is most unlikely that significant changes would be apparent. There would be so many changes as a result of change in the other factors, known and unknown, together with the inevitable measurement error, that the effect would almost certainly be drowned.

That pessimistic statement should not be misinterpreted. It does not imply that there is no effect. It does not imply that the effect should not or cannot be measured. It does imply that if we are to address seriously the problem of student achievement, base-line data are necessary, and they must be collected in the context of research that reasonably takes into account the variables which we believe affect student performance.

Long Term Effects of Teachers' Strikes on School Achievement - Studies in French Immersion.

We have suggested that the immediate effects of teachers' strikes would be comparatively slight and extremely difficult to measure. It is therefore obviously unlikely that long-term effects can be identified easily. One would certainly assume that long-term effects would be smaller than short-term effects. There is no research of the long-term effects of teachers' strikes on student achievement but there is research on an analogous and more extreme situation.

Children who take various kinds of French immersion programs are deprived of all or major parts of their instruction in English. Stern, Swain and McLean (1976), among others, report that immersion pupils do not suffer in terms of reading in their first language as a result of not receiving as much instruction in that language. Even more interesting, they report that even in cases where there is some loss of achievement gained in other subjects taught in the second language the loss is soon made up when children return to instruction in the first language (p.92). Both of these are fairly well established findings.

Therefore, we would hypothesize that ill effects of teachers' strikes on student achievement will quickly be erased if students return to normal instruction.

One other interesting facet of the immersion research bears out the conclusion of the international research that opportunity to learn is an important factor in student achievement. Generally speaking, Stern, Swain and McLean report that the more exposure to French, the more effective the learning. That statement may seem paradoxical in the light of the findings that deprivation of the first language teaching seems to have no effect. Why is it that instructional time seems so important in the second language and of so little importance in the first language?

There may be two parts to the explanation of why loss of instructional time in the first language seems to have so little effect. Stern, Swain and McLean suggest that learning to read in French may facilitate learning to read in English. French is a comparatively phonetic language - and skill in decoding words not always understood (an immersion child's reading vocabulary may be greater than the speaking vocabulary, the reverse of the normal situation), is readily transferred to English where the spoken words are normally understood. The second explanation is that there are probably norms of reading, to which children quickly adjust when they return to their normal grade level. These norms are probably societal norms, not just school norms, reinforced just as much by parents (who may help immersion children to learn to read in their first language) as by teachers. This question is addressed by the second hypothesis.

In contrast, French is typically learned by anglophone, Canadian children only when it is formally taught. Thus learning is highly dependent on instructional time. We have already hypothesized that the interference from teachers' strikes will be greatest where the objectives are clear and specific (Hypothesis 5) and where the interference is a significant proportion of the time allocated for the achievement of the objectives (Hypothesis 1). A French immersion program might well fulfil both those conditions. A six month teachers' strike could be expected to interfere considerably with the success of a one year 100% immersion program. particularly as the objectives are straighforward and are not achieved by any means except within the classroom. (Hypothesis 3). That would contrast with understanding of Canadian history and geography on the part of grade 13 students similarly affected by a strike of six months' duration. Canadian geography and history are learned only partly in school and that part over a thirteen year period. The overall effect of the entire loss of grade 13 would probably be minimal. Only if the following circumstances were met would one expect a measurable effect in those latter cases: there are no clear school and cultural norms of learning (Hypothesis 2); teaching is direct and test instruments relate closely to specific classroom activities (Hypothesis 3); and the course objectives are clear (Hypothesis 5).

CHAPTER III SCHOOL MARKS AND INSTRUCTIONAL TIME

School marks given by teachers correlate reasonably well with objective measures of student achievement. We have noted that the one variable explains about 25% of the variance in the other. Therefore, in a very gross way, one might expect all that has been said about instructional time and student achievement to apply, perhaps in a reduced way, to school marks. Very crudely, one might estimate that if 5% is a generous estimate of the average proportion of variance in objective measures of student achievement attributable to normal variations in the amount of instructional time, then something closer to 1% of the variance in marks would be so accounted for.[1] It must be taken into account that that 5% is a very crude guess, but probably a generous estimate. If it is a generous estimate for instructional time as a whole it is still more generous for the effect of a teachers' strike affecting all students for 40 or 50 instructional days.

While a strike itself is a new, and as yet, unusual phenomenon in Ontario, there is nothing unusual about wide variations in the time students spend in school. Attendance in Canadian high schools averages about 90%, so there is nothing unusual about a student missing 25 or more days a year. The typical student who misses 40 days from a strike is very different from the typical student who, for other reasons, misses 40 days from a regular school year. Therefore, one would expect the loss of time to be much less in the case of the strike affected student.

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[1] This would not be the case if it is accepted that the variance in teachers' marks not explained by tests also relates to academic achievement. It would be difficult to make a case for more than (or even as much as) 5%. The 1% estimate assumes that teachers' marks are much less closely related to actual achievement then objective scores. On the other hand, teachers' mark may discriminate better among a given class of students.

We have suggested that, for various reasons, it is very difficult to detect effects of teachers' strikes on objective measures of achievement. It will probably be more difficult to measure their effects on the objective achievement component of teachers' marks.

The questions arise then - what are the other components of school marks? and - will they be less or more affected by strikes?

We know of no research that has generated the variables that explain teachers' marks. There probably are very good reasons for that lack. Any research would only be valid for a particular place at a particular time. While we know that the objective test measured the same things in 1975 and in 1976 we have no way of knowing whether the same teacher, let alone different teachers, measured the same things in 1975 and in 1976, in different schools, in different jurisdictions.

We do know, however, that school marks correlate with one another somewhat better than they do with objective test results, showing at least that teachers are marking some of the same things. The most recent evidence of this comes from the Interface studies (1977) which show that, in Ontario, teachers' marks in grade 13 predict teachers' marks at the end of first year university about as well as did matriculation examinations before they were abolished. When we take into account the considerable variation in standards among schools, it is safe to state that within a given school, teachers' marks will predict university marks better than results of objective tests will predict university marks.

That suggests that entirely different teachers in different situations mark some of the same student characteristics. It does not show that the characteristics marked are necessarily attributes of academic achievement.

If the correlation between school marks in very different situations is around .6, at least an upper limit of about 40% is placed on the proportion of variance in teachers' marks that can be attributed to achievement. It might be argued (against that assumption) that different teachers have different objectives and therefore measure different kinds of achievement. That may well be so. Nevertheless, 40% would appear to be an upper limit on measures of achievement on which we might get general, objective agreement.[1] The lower limit is approximately 25%, the portion explained by objective measures of achievement.

What then explains the remainder of the variance in teachers' marks? An important word of caution must be entered at this point. The answers essayed here are strictly hypothetical. Even if they appear reasonable to the reader, and we hope they will, there can be no answer to the question that will suit all or most situations. Further, it must be remembered that we are talking about students' marks within the province of Ontario, not within a school board, school or class. The smaller the unit of analysis the greater the porportion of variance one would expect to be explained by achievement. The correlation between a single teacher's reading mark and standardized test scores in reading could easily be as high as .7 or .8 - but the statistic would drop for all students in a school board, and drop further for all students in the province.

Factors that probably contribute to an explanation of the variance in teachers' marks probably include the following.

Measurement Error. Error arises in three ways. Firstly, teachers' assessments may not be reliable - they probably vary from time to time and situation to situation for a given piece of work for a given student. Secondly, teachers' assessments may not be valid measures of the objectives they think they are assessing. This may not be a very large source of error as, although teachers do not always measure what they think they are measuring, different teachers may well actually be measuring the same things. For example, although knowledge does not usually figure very prominently in educational objectives it usually plays a very large part in teachers' assessments. Thirdly, error once made may be compounded. When a child is graded in a particular way, the teacher may form an opinion of the child that will influence future marks, even from other teachers.

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[1] Even with that (in our view) very generous assumption, instructional time is unlikely to influence more than 2 or 3% of the variance in school marks.

Differences Among Boards. Different educational jurisdictions may have different policies on marking - written or unwritten. Some may emphasize the maintenance of high standards while others may emphasize the importance of a low failure rate. Some may reward the teachers for achieving high standardized test scores which may be related to low school marks. Others may reward the teacher for consistently promoting every child and letting every child experience "success."

Differences Among Schools. Just as boards may differ systematically, so may schools. Principals may consciously give more or less emphasis to effort as distinct from achievement in the awarding of marks. Although marks may be high in high social status schools, they may be lower for a given standard of work as standards and expectations rise.

Differences Among Teachers. Just as schools may differ, so may individual teachers. Teachers have different standards or norms, that they learn in various ways.

Effort. Independently of board, school, and teacher differences, and independently of actual achievement, students who try harder are often given higher marks.

Politeness, Courtesy, Attractiveness and Home Background. Independently of the other variables, these personal characteristics may influence a student's marks.

Neatness of Work. Sometimes neatness is consciously included in marks, sometimes unconsciously. For example, marks on a test may depend partly on the legibility of the student's handwriting.

Idiosyncratic Factors. Quite apart from the variables listed that on average tend to work in a predictable fashion, there may well be unpredictable factors that explain a portion of the student's mark. These result from the relationship between the pupil (or class) and the teacher. For example, some teachers may give intelligent children lower marks, other things being equal. Intelligent children may be seen as being smart alecks, lazy, or a threat to the authority of the teacher. Some teachers may have ethnic, religious, or sex biases of one kind or another.

It can be seen that there would be some difficulty in relating these disparate factors to a teachers' strike. There is no immediately obvious, prima facie reason why any of these factors should be influenced by a strike in an easily predictable fashion.

Finally, we come to the question of the way in which a teachers' strike would in itself affect teachers' marks, by introducing new factors into the set that influences students' marks in the first place. We have already noted that a strike may affect an objective measure of achievement and therefore might be reflected in some minor way in students' marks. There are probably three possible ways in which students' marks could conceivably be affected by a strike. Firstly, they could be affected by changing students' achievement. Secondly, they could be affected by influencing the other variables that influence marks. Thirdly, an effect could be brought about directly by a strike through a change in teachers' perceptions of how rewards should be distributed. The first way is probably of slight effect, as teachers' marks only slightly reflect, if at all, trends in achievement. There is no obvious reason for assuming any great importance in the second way.

As for the third way, no clear rationale is evident for hypothesizing either that strikes would increase or decrease marks overall. In one way, one can argue that teachers have expectations of pupils, that they implicitly scale results to a preconceived curve and that therefore there will be no change. At least one board, East York, seemed to accept implicitly, by official policy, that there should be no change of marks. It suggested that less important parts of the course of study be omitted so that important work would be covered in the time available, presumably to the standards normally expected. The argument has also been made that teachers will be so eager to ensure that students, the innocent victims in a battle between teachers and trustees, will not suffer as a result of the strike that they will be exceptionally lenient, and thus marks will increase. Finally, it could be argued that actual standards will decline, and even if they do not, teachers will perceive a decline. Therefore teachers will react by awarding lower marks. Similar arguments can be made in the case of pupils, and their parents. They will work harder to compensate for what they have lost, or they will work less hard on account of their disgust.

We have examined school marks from a Quebec school board over the three years from 1974 to 1976. The last of the three years was marked by continuous interference with the education of students. There were frequent walkouts by teachers and students. The teachers worked to rule and frequently refused to record students' attendance or mark students' work. Many parents, students and educators referred to the last year as a wasted one. Failure rates for the three years are remarkably stable, with no decline at all discernible in the third year.

No hypothesis concerning school marks can reasonably be made. To the extent that they reflect an objective measure of achievement we would expect a slight reduction. A generous estimate of the effect, assuming (improbably) that all other factors remain constant, would be well under 5% - that is hardly likely to prove statistically significant. Even that assumption is based on the generous premise that a short-lived teachers' strike could have as much effect as all normal instructional time variables put together (attendance, school year, class time). In fact, there is no reason to believe that other factors would remain the same. Grade 13 students, on the average, may be slightly more or less tractable or intelligent in 1976 than in 1975. We do not know, and probably teachers do not know, how strikes affect teachers' marking habits, with one exception - where a conscious policy decision is collectively made to raise or lower marks.

CHAPTER IV SUMMARY - ACHIEVEMENT, SCHOOL MARKS AND INSTRUCTIONAL TIME

We began with the observation that the amount of schooling affects achievement. Educated people are different from uneducated people, at least partly as a result of their education. One does not usually learn to swim, or type, or conduct a scientific experiment without being taught. This led to Hypothesis 1:

In an isolated country with one year of formal education, outcomes of schooling will be less substantial than they will be in the case of an isolated country with ten years of formal education. There is a general positive relationship between amount of instruction and amount of learning.

We qualified the simple assertion of a relationship between time and learning by noting that there often appear to be norms of learning - and they are particularly likely to be developed in skill areas where progress can be seen by children and parents. This gave rise to Hypothesis 2: Fluctuations in the amount of instructional time will not have a commensurate effect on cognitive and affective outcomes, unless or until new norms are developed and accepted.

We then noted the measurement problem. When measuring achievement in large numbers of schools, educators naturally tend to measure the common objectives - and the common objectives are likely to be the ones that are not only common to schools but also common to homes and other agencies outside the school. The measurement problem is more a symptom than it is an actual basic difficulty. Some things are difficult to measure because they are not taught very directly, very explicitly. Finally, it is difficult to assess the effects of instructional time on objectives whose achievement is greatly affected by other individual variables - notably intelligence and cultural background. That led to Hypothesis 3:

A reduction in the instructional time will not have a measurable effect on general outcomes of education that are achieved over a long period of time, particularly where some combination of the following factors is present: the objectives are achieved outside as well as inside the school; the objectives are measured in very general ways; instruction towards the objectives is indirect; individual differences in intelligence and cultural background have much greater effect on achievement than differences in instruction.

Research suggests that the effects of elementary school instruction are more susceptible to changing circumstances than are those of secondary schools perhaps because they tend to teach specific skills rather directly. That led us to Hypothesis 4:

The lower the grade level, the smaller the amount of change in instructional time needed to produce a measurable difference in outcomes of schooling.

It was also suggested that the characteristics of what is being learned will determine the degree of effect of different amounts of instructional time. Simple objectives which are easily understood and transmitted will be more affected than objectives that are only comprehended with difficulty (and differently) by the instructors. That led to Hypothesis 5:

Instructional time will have a much greater effect on objectives that are clearly specifiable and easily understandable than on objectives that are less specifiable and understandable.

We should be wary of thinking that we can measure the effects of the strikes just by comparing achievement in a jurisdiction in a strike year with achievement in a non-strike year. It has been noted that there are many other potent variables that affect student achievement, notably cultural background and intelligence. Thus the third hypothesis leads to the more specific Hypothesis 6:

Particularly at the secondary level, there will not be measurable changes in achievement test results as a result of teachers' strikes unless other important variables can be controlled.

Research into French immersion shows clearly that time is a critical factor in learning a second language - simply, the more exposure one has the more one learns. Even more interesting, there is little reduction in learning in one's first language or in other subjects - and what interference there is quickly disappears when one is educated again with one's peers. This relates to the second hypothesis. Clearly one factor that will promote the rapid erasure of influence will be the existence of clear norms of learning. That leads us to Hypothesis 7:

The ill effects of teachers' strikes on student achievement will quickly be erased if students return to normal instruction.

We then turned to school marks and estimated that they would be even less affected by loss of instructional time than would objective measures of achievement because, almost certainly, considerably less than half the variance in students' marks can be explained by any agreed upon measures of objective achievement. Not only that, teachers' marks may not fluctuate with various changes in levels of achievement. As it is impossible to predict how teachers in particular circumstances will react in the aftermath of a strike, it would be dangerous to predict how school marks will vary. Any measurable change is most unlikely to be a result of actual declines in standards except in special circumstances. A change in school marks resulting from strikes is likely to be a result of a political or strategic decision made by teachers or administrators.

CHAPTER V FINDINGS

Objective Measures of Achievement

It has already been noted that no objective measures of achievement were available to the reasearch team. If the arguments put forward in Chapter III of this report are accepted, it will be seen that it is unlikely that a study and replication of the Interface testing procedures would have resulted in any measurable change that could have been attributed to the teachers' strikes. The factors affecting student achievement are so many and so complex that a change in one variable is unlikely to have discernible effects on achievement variables that measure skills generally developed over a fairly long period of time.

School Marks

In examining school marks we must reiterate that we do not see fluctuations in average marks as representing fluctuations in average achievement. The factors influencing teachers' marks are complex and student achievement is only one of them. In some circumstances, it is perfectly possible for average marks to be inversely related to average achievement, although, of course, at any one time the individual getting higher marks is also likely to be the individual with a higher standard of achievement. For example, a school might decide that it was going to improve achievement by raising its standards. The policy might work - the achievement would be higher, the marks would be lower.

Average Marks

Table 1 shows mean marks from a sample of Metropolitan Toronto's schools over a four-year period. It was in 1976 that Ontario's most serious teachers' strike closed all secondary schools in Metropolitan

Toronto for a period of over two months. The school sample was selected so as to represent a wide range of schools - vocational and academic, inner-city and suburban, from all Metropolitan Toronto, with the exception of North York, whose board did not provide data.

Courses were chosen to represent a variety of grade levels. They represent general skills, such as English, that we would hypothesize to be less affected by loss of instructional time as well as specific skills, such as physics and typing, that we would expect to be more affected. The table clearly shows that there was no overall change in the marks in any subject.

A more fine grained analysis of school marks was made. In selected schools of various types, comparisons were made in all subjects. The Board of Education of the City of Toronto made available computer printouts for all schools for all subjects for the years concerned. No systematic change in marks was observed across any single school. In one school only (not in the city of Toronto) we found a significant decrease in marks in 1976 in typing and some decreases in other subjects. Even in that one school, those decreases were offset by increases in other subject. We had anticipated that if any one subject would show a drop in marks it would be typing - as it is most likely to be tested according to a pre-defined achievement norm in terms of net words per minute. We have no way of knowing whether the decrease in marks in that one school resulted from the strike. It should be noted that the school is in a racially changing area and the school principal observed that the staff perceives a declining calibre of student - that perception was given to us before the final marks were known. Even if that one situation could be attributed to the strike, it was offset by the many subjects in schools where marks increased. Overall, there was no discernible change in any subject, in any school, in any board. Specifically, there was no general decrease of marks in typing.

TABLE 1

MEAN SCHOOL MARKS IN A SAMPLE OF METROPOLITAN
TORONTO SCHOOLS FROM 1973 - 1976
SCHOOLS WERE AFFECTED BY TEACHERS' STRIKE
IN 1976

Subject	Schools N	1973	1974	1975	1976	
English Gr. 9 (Advanced)	11	65.54	66.47	66.42	67.26	T= -1.92
Math Gr. 9 (Advanced)	8	65.14	65.88	66.76	66.94	T= -1.07
Math Gr. 10 (General)	13	60.79	60.20	61.28	62.17	T= -1.20
Typing Year 2	10	65.76	65.41	65.84	64.64	T= 2.01
Physics Gr.11 (Advanced)	11	64.31	64.01	64.55	65.14	T= -1.38
English Gr.13	8	66.21	66.45	66.43	66.75	T= -0.64
Chemistry Gr.13	5	64.47	65.03	66.53	66.20	T= -1.41

(None of the differences is significant whether one uses school or pupil as unit of analysis)

Source of data: Metropolitan Toronto School Boards (excluding North York).

We do not conclude necessarily that there was no change in the achievement of students. We have no way of knowing that. We have suggested that the probably change in the achievement of students in those subjects would be too small to be discernible to teachers.

This finding, of no perceptible change in school marks, is the most important finding of our study. The other tables show different kinds of reflection of school marks but we think the simple measure of marks themselves in various subjects at various grade levels is the single, best criterion. It will be noted that we have omitted geography and history from our analysis of school marks. That was deliberate as over the four years concerned there has been a tendency for geography and history to become obligatory, thereby changing the kind of student represented in the classes. In any case, we would anticipate that those subjects would be among the least affected by interruption in instructional time.

In may be argued that the reason why marks remained the same was that increasing numbers of students dropped out of school. The drop-out portion of this research must be considered in conjunction with our findings here. It seems apparent that there is no consistent increase in the drop-out rate in the strike year that would account for the stability of the marks. Even if there were an increase in drop-outs, to question our finding here one would have to be able to demonstrate that the additional drop-outs caused by the strike were of sufficiently low calibre to affect the overall average marks in the schools. That would appear to be highly improbable.

We can only conclude that teachers did not alter their system of distributing rewards in the form of marks to students during the strike year.

Ontario Scholars

Tables 2 and 3 are concerned with Ontario scholarships. Ontario scholarships are granted to students with average marks of 80% or more in their best six grade 13 subjects. The tables are designed to show whether schools affected by stikes gave fewer or more high marks in the

TABLE 2A

ONTARIO SCHOLARSHIPS 1973 - 1976 IN SCHOOL SAMPLES FROM 18 SELECTED BOARDS

Board	1973	1974	1975	1976
East York	68	54	75	79*
Etobicoke	41	38	51	37*
North York	190	200	186	218*
Scarborough	62	82	108	106*
Toronto	133	150	180	182*
York Borough	10	9	10	4*
Central Algoma	0	4	8	2*
Cochrane	13	9	19	12
Durham	55	65	70	89
Kirkland Lake	12	14	13	14*
Lakehead	16	27	18*	16
London	53	63	64	51
Peel	73	96	93	82
Sault Ste Marie	26	30	31	23*
Sudbury	27	91	93	73
York County	18	32*	28	25
Waterloo	45	49	66	49
Windsor	30*	46	62*	65*

$t_{13} = 0.468$

* Indicates a year in which a board was affected by a teachers' strike.

The strike years are not significantly different from the non-strike years.

Source of data: Ontario Ministry of Education.

TABLE 2B

COLLATED DATA COMPARING NUMBERS OF ONTARIO SCHOLARS IN STRIKE YEARS WITH NUMBERS IN NON-STRIKE YEARS

		Mean of strike year(s)	Mean of non-strike year(s)
Total Ontario Scholarships of board affected by strike in 1973,1975,1976	N=1	52.3	46
Total Ontario Scholarships of board affected by strike in 1974 only	N=1	32	23.67
Total Ontario Scholarships of board affected by strike in 1975 only	N=1	18	19.67
Total Ontario Scholarships of boards affected by strikes in 1976 only	N=9	665	595

		1973	1974	1975	1976
Mean of boards with strike in 1976 only	N=9	60.2	64.6	73.6	73.9
Mean of boards with no strikes	N=6	44.3	62.2	67.5	59.3

There is no significant difference between strike and non-strike years.

year concerned. Table 2A shows the raw data - the actual number of scholars in a selected sample of schools from certain Ontario boards. The boards not affected by strikes were chosen to parallel as closely as possible the strike affected boards. There is of course no perfect parallel to Metropolitan Toronto.

The data show considerable variability from year to year, apparently unrelated to teachers' strikes. There is no evidence whatsoever that the numbers of Ontario scholarships decreased in strike years.

Table 2B collates information from Table 2A. In general, strike-affected boards appear to have granted rather more Ontario scholarships in strike years than in non-strike years, although the increase is not significant. For example, strike affected boards maintained their numbers of scholars in 1976 while the non-strike affected boards saw a slight reduction.

Table 3 shows the same information expressed as a percentage of enrolment reported the previous September. At first sight, these data may appear to be more legitimate than those in Table 2. Table 2 showed raw data and it is of course possible that the number of students fluctuates from board to board and from year to year in such a way that the effects of strikes are drowned. Unfortunately, the enrolment data show such great fluctuations that we are inclined to treat them with considerable reservation. One cannot be at all sure that a particular school has prepared enrolment data on the same basis from one year to another. Some of the fluctuations may be due to school boundary changes, although we have tried to eliminate that factor. In Table 3A, six boards show more scholars in strike years, and six more in non-strike years. Table 3B shows that in three years out of four, strike affected boards gave more scholarships than non-strike affected boards - in proportion to the enrolment reported the previous September.

We can fairly conclude that over the four years 1973 to 1976, students did not fail to attain Ontario Scholarships as a result of teachers' strikes.

Graduation Dipolmas

The secondary school graduation diploma is granted to students who have earned 27 graduate credits in their high school years. They are normally in twelfth grade although they may be in either grade eleven or thirteen. Table 4A provides the numbers of diplomas granted and also shows the diplomas granted as a proportion of Grade 12 enrolment. Once again, we must caution against too ready acceptance of the reliability of the enrolment data. We are less sceptical of the graduation statistics as it should be a fairly easy measure for a school to assess how many students have in fact achieved diplomas. Even here however, these statistics must be treated with circumspection. Not all students are granted diplomas in June. Some take courses during the summer and the suceeding year. Some students may finish in January. We have tried to ensure consistency of treatment of the statistics but we are ultimately dependent on the reliability of reporting methods in the schools.

Table 4A shows that the percentage of students graduating was generally lower in strike years. Table 4B however shows that the percentage of diplomas awarded was lower overall in 1976, a most severely affected strike year, in non-strike affected as well as strike affected schools. There is certainly no consistent relationship between strike years and the proportions of students graduating. Table

TABLE 3A

ONTARIO SCHOLARSHIP 1973-1976 IN SCHOOL SAMPLES FROM 18 SELECTED BOARDS

AS A PROPORTION OF REPORTED ENROLMENTS IN PREVIOUS SEPTEMBER

	1973			1974			1975			1976			% strike year(s)	% non-strike year(s)
Board	E	OS	%	E	OS	%	E	OS	%	E	OS	%		
East York	442	68	15.39	437	54	12.36	567	75	13.23	695	79	11.37*	11.37	13.62
Etobicoke	299	41	13.71	287	38	13.24	295	51	17.29	301	37	12.29*	12.29	14.76
North York	903	190	21.04	924	200	21.65	812	186	22.91	891	218	24.47*	24.47	21.83
Scarborough	529	62	11.72	512	82	16.02	528	108	20.46	494	106	21.46*	21.46	16.06
Toronto	1019	133	13.05	1116	150	13.44	1201	180	14.99	1207	182	15.08*	15.08	13.88
York Borough	129	10	7.75	77	9	11.69	75	10	13.33	131	4	3.05*	3.05	10.32
Central Algoma	32	0	0	40	4	10.00	38	8	21.05	39	2	5.13*	5.13	10.91
Cochrane	85	13	15.29	72	9	12.50	69	19	27.54	86	12	13.95		16.99
Durham	412	55	13.35	423	65	15.37	419	70	16.71	502	89	17.73		15.89
Kirkland Lake	181	12	6.63	138	14	10.15	138	13	9.42	133	14	10.53*	10.53	8.53
Lakehead	194	16	8.25	168	27	16.07	153	18	11.76*	133	16	12.03	11.76	11.92
London	376	53	14.10	354	63	17.80	479	64	13.36	431	51	11.83		14.09
Peel	515	73	14.17	593	96	16.19	550	93	16.91	617	82	13.29		15.12
Sault Ste Marie	210	26	12.38	174	30	17.24	198	31	15.66	193	23	11.92*	11.92	14.95
Sudbury	566	27	4.77	535	91	17.01	523	93	17.78	557	73	13.11		13.02
York County	117	18	15.39	144	32	22.22*	135	28	20.74	141	25	17.73	22.22	18.07
Waterloo	549	45	8.20	449	49	10.91	448	66	14.73	477	49	10.27		10.87
Windsor	260	30	11.54*	275	46	16.73	289	62	21.45*	268	65	24.25*	19.22	16.73

* Indicates a year in which a board was affected by a teachers' strike. n - 12 t = - .19 df = 11

Source of data: Ontario Ministry of Education.

TABLE 3B

COLLATED DATA 1973-1976 FOR SCHOOL SAMPLES FROM 18 SELECTED BOARDS SHOWING ONTARIO SCHOLARS AS A PROPORTION OF REPORTED ENROLMENT IN PREVIOUS SEPTEMBER

	1973	1974	1975	1976	TOTAL
a. Strike affected boards' scholars	30	32	80	730	872
b. Strike affected boards' enrolment	260	144	442	4352	5198
c. a as a percentage of b	11.54	22.22	18.10	16.77	16.78
d. Non-strike affected boards' scholars	842	1027	1095	397	3361
e. Non-strike affected boards' enrolment	6558	6574	6475	2944	22551
f. d as a percentage of e	12.84	15.62	16.91	13.49	14.90

Source of data: Ministry of Education

TABLE 4A

GRADUATION DIPLOMAS 1973-1976 IN SCHOOL SAMPLES FROM 18 SELECTED BOARDS AS A PROPORTION OF REPORTED ENROLMENTS IN THE PREVIOUS SEPTEMBER

	1973			1974			1975			1976			% strike year(s)	% non-strike year(s)
Board	E	GD	%	E	GD	%	E	GD	%	E	GD	%		
East York	742	522	72.10	770	586	76.10	885	670	75.71	912	613	67.22*	67.22	74.92
Etobicoke	403	386	95.78	446	402	86.27	448	410	91.52	432	362	83.80*	83.80	92.37
North York	1341	1183	88.21	1274	1090	85.56	1333	1009	75.69	1312	937	71.42*	71.42	83.13
Scarborough	952	765	80.04	803	708	88.17	781	732	93.73	750	724	96.53*	96.53	86.95
Toronto	1602	1114	69.54	1575	1160	73.65	1574	1163	73.89	1631	1328	81.42*	81.42	72.34
York Borough	363	289	79.61	263	278	105.70	267	287	107.49	400	329	82.25*	82.25	95.63
Central Algoma	109	112	102.75	136	109	80.15	122	118	96.72	116	115	99.14*	99.14	92.37
Cochrane	169	154	91.12	193	154	79.79	198	168	84.85	198	176	88.89		86.02
Durham	910	634	69.67	766	634	82.77	937	719	76.73	928	715	77.05		76.31
Kirkland Lake	336	248	73.81	311	226	72.67	293	206	70.31	288	186	64.58*	64.58	72.34
Lakehead	519	396	76.30	481	383	79.63	437	344	78.72*	456	370	81.14	78.72	78.92
London	1122	756	67.38	930	623	66.99	806	677	84.00	837	713	85.19		74.94
Peel	956	921	96.34	998	882	88.38	1051	864	82.21	1236	1049	84.87		87.62
Sault Ste Marie	418	343	82.06	458	370	80.79	464	384	82.76	445	347	77.98*	77.98	81.87
Sudbury	1183	1015	85.80	1129	941	83.35	1217	1010	82.99	1308	1009	77.14		82.18
York County	291	239	82.13	280	231	82.50*	254	219	86.22	282	225	79.79	82.50	82.59
Waterloo	996	774	77.71	992	747	75.30	1078	748	69.39	1097	740	67.46		72.28
Windsor	560	449	80.18*	583	531	91.08	470	534	113.62*	591	493	83.42*	91.06	91.08
													n = 12	t = -1.02 df=11

* Indicates a year in which a board was affected by a teachers' strike.

Source of data: Ontario Ministry of Education.

TABLE 4B

COLLATED DATA 1973-1976 FOR SCHOOL SAMPLE FROM 18 SELECTED BOARDS SHOWING GRADUATION DIPLOMAS AS A PROPORTION OF REPORTED ENROLMENTS IN THE PREVIOUS SEPTEMBER

	1973	1974	1975	1976	TOTAL
a. Strike affected boards' diplomas	449	231	878	5434	6992
b. Strike affected boards' enrolments	560	280	907	6877	8624
a as a percentage of b	80.18	82.50	96.80	79.02	81.08
d. Non-strike affected boards' diplomas	9851	9824	9384	4997	34056
e. Non-strike affected boards' enrolment	12412	12108	11708	6342	42570
f. d as a percentage of e	79.37	81.14	80.15	78.79	80.00

Source of data: Ontario Ministry of Education

TABLE 4C

COLLATED DATA COMPARING GRADUATION DIPLOMAS AS A PROPORTION OF REPORTED ENROLMENT IN STRIKE YEARS WITH NON-STRIKE YEARS

		% strike year(s)	% non strike year(s)
Graduation Diplomas (as % of reported enrolment) in board affected by strike in 1973,1975,1976	N=1	91.06	91.08
Graduation Diplomas (as % of reported enrolment) in board affected by strike in 1974 only	N=1	82.50	82.59
Graduation Diplomas (as % of reported enrolment) in board affected by strike in 1975 only	N=1	78.72	78.92
Graduation Diplomas (as % of reported enrolment) in boards affected by strike in 1976 only	N=6	78.60	80.51

		1973	1974	1975	1976
Proportion in boards with strike in 1976 only	N=9	79.19	81.66	80.74	78.60
Proportion in boards with no strike	N=6	79.72	79.49	79.18	78.55

There is no significant difference between the trends in strike and non-strike boards.

4C summarizes the situation and shows generally no difference between strike years and non-strike years within specific boards. If we isolate the boards with strikes in 1976 only and compare them with boards that experienced no strikes at all, we find extremely similar proportions over the four years. Certainly there is a slight reduction in 1976 compared with 1975 but that is also the case with the boards that had no strike at all.

Tables 5 and 6 parallel Table 4 but provide information concerning the secondary school honor graduation diplomas, granted on the successful completion of grade 13. Table 5 gives the breakdown for female students, Table 6 for male students. As these statistics were available we thought it might be useful to show them separately in case there was an effect on females but not on males, or vice versa. Once again we must note the limitation of the reliability of the enrolment data. There is a decrease in the proportion of diplomas granted in Metropolitan Toronto generally, as reflected in the sharp decline for females in strike boards from 80.75% in 1974 to 74.58% in 1976. The figures for males show the same trend. The decrease for girls in non-strike boards was from 71.1% to 70.28%.

There are a number of possible explanations for this decrease. The most obvious explanation is that in some way the teachers' strike lowered the proportion of students graduating with grade 13 diplomas. A second explanation is that the changes are artefacts of spurious enrolment data. A third explanation is that the change took place as a result of other social factors in Toronto unrelated to the strike. For example, Toronto has experienced some emigration of young people to the new suburbs outside of Metropolitan Toronto.

TABLE 5A

HONOR GRADUATION DIPLOMAS 1973-1976 FOR FEMALE STUDENTS IN SCHOOL SAMPLES FROM 18 SELECTED BOARDS AS A PROPORTION OF REPORTED ENROLMENTS IN THE PREVIOUS SEPTEMBER

	1973			1974			1975			1976			% strike year(s)	% non-strike year(s)
Board	E	HO	%	E	HO	%	E	HO	%	E	HO	%		
East York	195	140	71.80	185	138	74.60	248	181	72.98	293	192	65.53*	65.53	73.09
Etobicoke	122	108	89.26	99	85	85.86	128	115	89.84	149	119	79.87*	79.87	88.25
North York	412	429	102.13	440	434	98.64	357	389	108.96	443	423	95.49*	95.49	103.56
Scarborough	252	206	81.75	235	204	86.81	235	214	91.06	221	175	71.19*	71.19	86.43
Toronto	421	269	74.11	444	309	69.59	486	304	62.55	489	297	60.74*	60.74	65.29
York Borough	26	18	69.23	18	25	138.89	17	13	76.47	27	15	55.56*	55.56	91.80
Central Algoma	21	14	66.67	21	18	85.71	21	14	66.67	23	19	82.61*	82.61	73.02
Cochrane	48	39	81.25	35	26	74.29	27	22	81.48	50	39	78.00		78.75
Durham	182	130	71.43	186	138	74.19	193	137	70.98	247	188	76.11		73.39
Kirkland Lake	89	57	64.05	63	46	73.02	67	40	59.70	63	29	46.03*	46.03	65.30
Lakehead	82	65	79.27	53	46	86.79	63	45	71.43*	62	52	83.87	71.43	82.74
London	169	124	73.37	140	122	87.14	241	112	46.47	200	118	59.00		63.47
Peel	229	180	78.60	291	232	79.73	247	200	80.97	277	194	70.04		77.20
Sault Ste Marie	109	88	80.73	80	68	85.00	93	64	68.82	102	81	79.41*	79.41	78.01
Sudbury	246	179	72.76	219	181	82.65	235	188	80.00	239	184	76.99		77.96
York County	57	49	85.97	62	66	106.45*	66	53	80.30	65	50	76.92	106.45	80.85
Waterloo	244	188	77.05	231	172	74.46	185	143	77.30	215	140	65.12		73.49
Windsor	105	79	75.24*	73	62	84.93	112	95	84.82*	111	100	90.09*	83.54	84.93

*Indicates a year in which a board was affected by a teachers' strike.

n = 12 t = - 1.43 df=11

Source of data: Ontario Ministry of Education.

TABLE 5B

COLLATED DATA 1973-1976 FOR SCHOOL SAMPLES FROM 18 SELECTED BOARDS SHOWING HONOR GRADUATION DIPLOMAS AS A PROPORTION OF REPORTED ENROLMENT IN PREVIOUS SEPTEMBER

	1973	1974	1975	1976	TOTAL
a. Strike affected boards' honor diplomas	79	66	140	1450	1735
b. Strike affected boards' enrolment	105	62	175	1921	2263
c. a as a percentage of b	75.24	106.45	80.00	75.48	76.67
d. Non-strike affected boards' diplomas	2283	2306	2189	965	7743
e. Non-strike affected boards' enrolments	2904	2813	2846	1355	9918
f. d as a percentage of c.	78.62	81.98	76.92	71.22	78.07

Source of data: Ontario Ministry of Education

TABLE 5C

COLLATED DATA COMPARING HONOR GRADUATION DIPLOMAS FEMALE AS A PROPORTION OF REPORTED ENROLMENT IN STRIKE YEARS WITH NON-STRIKE YEARS

		% strike year(s)	% non-strike year(s)
Honor Graduation Diplomas female (as % of reported enrolment) in board affected by strike in 1973,1975,1976	N=1	83.54	84.93
Honor Graduation Diplomas female (as % of reported enrolment) in board affected by strike in 1974 only	N=1	106.45	80.85
Honor Graduation Diplomas female (as % of reported enrolment) in board affected by strike in 1975 only	N=1	71.43	82.74
Honor Graduation Diplomas female (as % of reported enrolment) in boards affected by strikes in 1976 only	N=9	74.58	81.70

		1973	1974	1975	1976
Proportion in boards with strike in 1976 only	N=9	80.69	83.72	80.75	74.58
Proportion in boards with no strikes	N=6	75.13	79.04	71.10	70.28

The lower percentage of diplomas in the strike years is not significant.

TABLE 6A

HONOR GRADUATION DIPLOMAS MALE 1973-1976 IN SCHOOL SAMPLES FROM 18 SELECTED BOARDS AS A PROPORTION OF REPORTED ENROLMENTS IN THE PREVIOUS SEPTEMBER

	1973			1974			1975			1976			% strike year(s)	% non-strike year(s
Board	E	HO	%	E	HO	%	E	HO	%	E	HO	%		
East York	247	155	62.75	252	156	61.90	319	190	59.56	402	215	53.48*	53.48	61.25
Etobicoke	177	121	68.93	188	125	66.49	167	114	68.26	152	85	55.92*	55.92	67.67
North York	491	474	96.54	484	452	93.39	455	439	96.48	448	438	97.77*	97.77	95.46
Scarborough	277	195	70.40	277	178	64.26	293	195	66.55	273	210	76.92*	76.92	67.06
Toronto	598	363	60.70	672	385	57.29	715	427	59.72	718	391	54.46*	54.46	59.19
York Borough	103	57	55.34	59	30	50.85	58	33	56.90	104	21	20.19*	20.19	54.55
Central Algoma	11	6	54.55	19	10	52.63	17	13	76.47	16	11	68.75*	68.75	61.70
Cochrane	37	22	59.46	37	18	48.65	42	27	64.29	36	21	58.33		57.90
Durham	200	114	57.00	237	146	61.60	186	148	79.57	255	184	72.16		67.74
Kirkland Lake	92	57	61.96	75	47	62.67	71	39	54.93	70	24	34.29*	34.29	60.08
Lakehead	112	65	58.27	115	78	67.83	90	51	56.67*	71	40	56.34	56.67	61.41
London	207	140	67.63	214	146	68.22	168	119	70.83	231	132	57.14		65.49
Peel	286	205	71.68	302	183	60.60	303	188	62.05	340	196	57.65		62.71
Sault Ste Marie	101	69	68.32	94	58	61.70	105	66	62.86	91	48	52.75*	52.75	64.33
Sudbury	320	198	61.88	316	199	62.98	288	157	54.51	318	212	66.67		61.68
York County	60	48	80.00	82	58	70.73*	69	38	55.07	76	43	56.58	70.73	62.93
Waterloo	305	175	57.38	218	151	69.27	263	177	67.30	262	156	59.54		62.88
Windsor	155	114	73.55*	99	75	75.76	177	130	73.45*	152	107	70.40*	72.52	65.76

n = 12 t = - 1.67 df=11

*Indicates a year in which a board was affected by a teachers' strike

Source of data: Ontario Ministry of Education

TABLE 6B

COLLATED DATA 1973-1976 FOR SCHOOL SAMPLES IN 18 SELECTED BOARDS SHOWING HONOR GRADUATION DIPLOMAS AS A PROPORTION OF REPORTED ENROLMENT IN PREVIOUS SEPTEMBER

	1973	1974	1975	1976	TOTAL
a. Strike affected boards' honor diplomas	114	58	181	1550	1903
b. Strike affected boards' enrolment	155	82	267	2426	2930
c. a as a percentage of b	73.55	70.73	67.79	63.89	64.95
d. Non-strike affected boards' honor diplomas	2464	2437	2370	984	8255
e. Non-strike affected boards' enrolment	3624	3658	3519	1589	12390
f. d as a percentage of e	67.99	66.62	67.35	61.93	66.63

Source of data: Ontario Ministry of Education

TABLE 6C

COLLATED DATA COMPARING HONOR GRADUATION DIPLOMAS MALE AS A PROPORTION OF REPORTED ENROLMENT IN STRIKE YEARS WITH NON-STRIKE YEARS

		% strike year(s)	% non-strike year(s)
Honor Graduation Diplomas male (as % of reported enrolment) in board affected by strike in 1973,1975,1976	N=1	72.52	75.76
Honor Graduation Diploma male (as % of reported enrolment) in board affected by strike in 1974 only	N=1	70.73	62.93
Honor Graduation Diploma male (as % of reported enrolment) in board affected by strike in 1975 only	N=1	56.67	61.41
Honor Graduation Diploma male (as % of reported enrolment) in boards affected by strike in 1976 only	N=9	63.46	69.41

		1973	1974	1975	1976
Proportion in boards with strike in 1976 only	N=9	71.39	67.97	68.91	63.46
Proportion in boards with no strikes	N=6	63.03	63.37	65.28	62.48

The lower percentage of diplomas in the strike years is not significant.

At the same time, immigration, increasingly from countries with educational standards well below those of Canada, is off-setting some of the losses. The state of the economy may also affect educational statistics. Another possible explanation is that the reduction is just a chance reduction that could have taken place in any year. These reductions are not statistically significant.

We can make no very confident choice among the various explanations of the data. However, it does seem reasonable to conclude that, even if the changes did result from the teachers' strike, they probably did not result directly from any major change in teachers' behavior with respect to school marks. School marks obviously did not decline significantly overall. If the decreases are strike related, the reduction in the numbers of students obtaining honor graduation diplomas may be seen as resulting either from student decisions to drop out of school, to drop some courses, or from minor fluctuations in the distribution of school marks.

Credits

If we were in danger of over-interpreting the results of Table 6, Table 7 should correct that tendency. Table 7 is designed, together with the tables showing graduation diplomas, to complement the findings with respect to course averages. It is possible that course averages are maintained in a strike year only because considerable numbers of poorer students dropped the courses altogether. If that is so, we would expect a smaller proportion of graduates in grade 12 and 13 and a smaller proportion of credits compared with class enrolment. Table 7 shows that there was no perceptible change in credits granted as a proportion of students enrolled in a representative sample of Toronto schools.

TABLE 7

CREDITS GRANTED BY SELECT METROPOLITAN TORONTO SCHOOLS IN SELECTED COURSES AS A PROPORTION OF ENROLMENT

REPORTED IN PREVIOUS SEPTEMBER

SCHOOLS WERE AFFECTED BY A TEACHERS' STRIKE IN 1976

		1973			1974			1975			1973-75 combined			1976		
Board	N	E	C	%	E	C	&	E	C	%	E	C	%	E	C	%
English Grades 9 & 10 Advanced	3	1502	1304	86.82	1685	1373	81.48	1652	1389	84.08	4839	4066	84.03	1708	1399	81.91
English Grades 9 & 10 General and Advanced	4	3612	2845	78.77	3437	2651	77.13	3309	2780	84.01	10358	8276	79.90	3284	2771	84.38
Math Grades 9 & 10 Advanced	2	992	784	79.03	1060	847	79.91	998	838	84.82	3040	2469	81.22	1036	860	83.01
Math Grades 9 & 10 General and Advanced	4	2740	1927	70.33	2530	1852	73.20	2751	2032	73.86	8021	5811	72.45	2634	2029	77.03
Math Grades 9 & 12	1	716	469	65.50	743	465	62.58	683	405	59.30	2142	1339	62.51	663	414	62.44
Typing Grades 9, 10, & 11	4	1754	1313	74.86	1425	1208	84.77	1626	1325	81.49	4805	3846	80.04	1519	1208	79.53
History Grades 1[illegible] 12	7	2324	1767	76.03	1993	1560	78.27	2320	1573	67.80	6637	4900	73.83	2046	1497	73.17
Physics Grade [illegible]	7	1311	1002	76.47	1406	1092	77.67	1484	1138	76.68	4201	3232	76.93	1501	1212	80.75
Chemistry Grade 13	4	423	294	69.50	485	354	72.99	527	384	72.87	1435	1032	71.62	563	414	73.54

Source of data: Ontario Ministry of Education.
Metropolitan Toronto School Boards (excluding North York)

There is no significant difference between the proportions in non-strike years and in 1976.

If we compare these results with results of Tables 5 and 6 there appears to be an inconsistency. Tables 5 and 6 suggest that the proportion of students graduating from grade 13 declined in the strike year in Metropolitan Toronto whereas Table 7 shows no decrease in the proportion of credits granted. We should also bear in mind that Table 7 is consistent with Table 1, which showed no general reduction in the mean mark in any grade level in Metropolitan Toronto. We also examined individual school data to see if there were changes in the numbers of very low marks or the numbers of very high marks. No such changes could be found.

There are several possible explanations for the apparent discrepancy in the two tables, Table 6 and Table 7. Very likely no single explanation is the correct one. The strike may indeed have affected grade 13 students more than other students. There may have been a slight increase in the number of drop-outs, perhaps not a significant increase but nevertheless a small increase. Similarly, there may have been minor changes in the distribution of marks, not significantly affecting the overall averages. Variation in the enrolment data may also explain part of the discrepancy. There is one further explanation, obviously insufficient in itself, that might also help to explain the discrepancy. If students are gradually tending to take more difficult options where the pass rate is lower, then one would expect there to be a decrease in grade 13 diplomas without any concurrent decrease in the proportions of students obtaining credits in any particular course. There would appear to be no particular reason why in 1976 students in Metropolitan Toronto would suddenly begin to take more difficult options - but there may be a trend in that direction. When the economy is poor, students tend to have more utilitarian purposes and so courses in the sciences, for example, have more appeal than courses in the social sciences. We have further examined our data and find no significant difference in 1976 in the proportions of students taking more difficult options.

CHAPTER VI CONCLUSION

We set out to answer the question - what effect do strikes of Ontario teachers have on the achievement of students? We defined achievement in two ways. The first is cognitive development - the accumulation of knowledge, growth of skills, conceptual understanding and the ability to analyze and synthesize within the disciplines. The second concern was the distribution of the rewards for achievement that teachers have under their control. Both are of interest to us. Actual changes in achievement are of importance to our society - the public is rightly concerned about the levels of scholastic development in the schools. Students, and their parents, are interested in the rewards that are then translated into accessibility to various avenues of further education.

We were unable to measure the effects of teachers' strikes on cognitive development for a number of reasons. There is very little in the way of base-line data on the achievement of secondary students in Ontario at the board level - and specific boards, not the province as a whole, were affected by strikes. We had hoped to use the Interface data for preliminary comparisons between strike and non-strike boards, and then replicate the testing in a non-strike year. This proved impossible.

Research on student achievement shows that the factors contributing to achievement are most complex. Instructional time is certainly of importance - children do not usually learn a specific skill unless they are taught, and educational skills are principally taught in school. It would be naive to believe that there is a simple direct relationship between instructional time and achievement. It is most unlikely that students who miss one fifth of the school year will lose one fifth of the academic gain they would have made. Educational norms operate in education, and it is probable that, very often, work expands to take the time available. Even if the strike had important, proportionate effects on achievement it is by no means certain that achievement tests would have discerned the effect. Tests usually test general skills that are learned over long periods of time, not just the skills learned in a given year. Further, the variables affecting achievement are so complex and so varied that it is most unlikely that they would remain unchanged from one year to the next. Even if achievement improved, or deteriorated, in a strike year,it would be difficult, without a longitudinal study covering several strikes, to conclude whether the changes were caused by the strikes. Most probably, no differences in achievement would be discerned from achievement tests given in strike and non-strike years - particularly in subjects like mathematics and English where the skills are developed over periods of time. That finding, were it to be made, would not lead to the conclusion that strikes have no effect, only that any effects are insufficient to be noticeable given the many other factors that affect achievement.

An effective study of student achievement in Ontario, related to strikes and other factors, would be a complex, lengthy, and expensive undertaking. It would require the development of data bases that include measures of the factors that appear to be more critical in influencing student achievement. Only when those factors are controlled would we be in a position to declare precisely the effects of interruptions in the school year. It would also be necessary to develop tests of quite specific skills that are taught in school as well as the general skills that are usually tested by objective test instruments. Such a study would scarcely be worthwhile solely to assess the effects of teachers' strikes. It would have to be justified in terms of the additional information it would provide on all the various factors, some of which are under the control of educators, that influence student achievement.

It would be reasonably safe to conclude that in very few cases, if any, would students lack essential knowledge and skills, as a result of the strike, that would interfere over time with their academic progress.

We were able to examine the way in which teachers distribute rewards to students - marks, graduation diplomas, Ontario Scholarships, credits. Generally speaking, there appeared to be no difference in the way rewards were allocated in strike years. This should not prove too surprising as marks only partially reflect objective achievement, and as we have suggested, achievement itself would only be marginally affected by a strike interruption. It does seem that there were fewer (but not significantly fewer) grade 13 graduates in strike years - particularly in Metropolitan Toronto in 1976. A change is slightly more evident for girls than for boys. The evidence suggests that this change is unlikely to be attributable simply to teacher behavior in school - to low marks, more failures, lower achievement. The reduction may not even be related to the strike - it may reflect a disenchantment with education given the current economic situation or it may reflect other factors completely unrelated to the strike. A further possibility is that the strike may have further disheartened the already disenchanted. It did not apparently affect the overall distribution of marks by teachers and did not affect either marks or graduation diplomas except at the grade 13 level.

It would be dangerous to predict the future from the past - particularly in the area of school marks. Teachers' marks depend on a number of factors. Teachers or boards could,and often do, change marks by policy. It is reasonable to surmise that teachers had no wish to punish students by awarding lower marks after the strike. In most future situations, the teachers' decision would probably be the same. The point is that the rewards are, in practice, largely in teachers' hands, and whether they raise or lower the level of marks provided is a matter of their decision.

As for achievement, no conclusive remarks can be made. Research on student achievement suggests that it is improbable that interruption of the school year, up to an entire school year, would greatly affect the life chances or the development of general academic skills in most young people. Areas where the effect would probably be most noticeable would be in specific skills, such as typing, which were either little taught or not taught at all in the year, at the elementary level (over the short term) and in subjects that are least taught outside the school (physics, chemistry, French as a second language).

Research is still far from being definitive about the effects of different factors on student achievement. Instructional time in general, and interruptions caused by school strikes, are among the factors about which least is known. Research plans to determine further the relationships between instructional time and achievement should take into account the varied other factors that are believed to be influences on school achievement.

In sum, there is no reason to believe that teachers' strikes in Ontario have had major short term, still less long term, effects on students' achievement or life chances.

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II

The Effects of Ontario Teachers' Strikes on the Attitudes and Perceptions of Grades 12 and 13 Students

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ABSTRACT

This study is one of three research projects contracted by the Ontario Ministry of Education to the Ontario Institute for Studies in Education to examine the impact of teacher strikes on students. The other two studies analyze the impact on dropout rates and rate of entry into post-secondary institutions, and the impact on student achievement. Our study analyzes the attitudes and perceptions of Grades 12 and 13 students toward the strike experience and its consequences.

Three situations in which high school teachers went on strike were investigated: 1) the strike in Metro Toronto which involved some 140 schools and took place from November 12, 1975 until January 16, 1976, 2) the strike in Thunder Bay which took place from November 26, 1974 until February 4, 1975 and involved 10 secondary schools, and 3) the teachers' strike at Central Algoma high school which lasted from January 16, 1976 until April 12, 1976 and affected the one high school in the Board.

We selected two independent samples - one for a survey study; the other for interviews. The survey sample consisted of a 10% random sample from Metro Toronto, and a 100% sample from the two smaller locations of students who were in Grades 12 and 13 at the time of the strike and had proceeded to a post-secondary institution (University, Ryerson or Community College). We obtained a very high response rate from a mailed questionnaire (74% (N = 1172) of the sample). The interview sample consisted of a random selection of .06% of the students from Metro Toronto, and larger proportions from the other two locations for a total of 134 students. By replacing students who were not available or did not want to be interviewed, we ended up with a 96% response rate.

The questionnaire and interview schedule followed parallel lines designed to obtain information on 1) what students did during the strikes, 2) perceived consequences on the learning climate and learning outcomes at the high school and post-secondary levels, 3) attitudes toward teachers, and toward teacher strikes,

and 4) general attitudes toward their secondary school experience, and toward the research study.

By and large, the survey and interview findings were similar. We found that about half the students reported that they did little or no school related work during the strike, and only a fifth of the students stated that the school work they did was helpful. From 15-20% of the students said that one of the main outcomes of the strike was a loss of respect for teachers. About half the students stated that they did not think teachers should be able to go on strike. Over two thirds said that there was a need for students to be better prepared for future strikes. The majority of students reported that their parents were opposed to the teachers. About one half of the students who read newspapers regularly, thought that the media coverage was biased toward the Board (and thus, against the teachers).

The possible impact on learning was examined in some detail. About three quarters of the sample said that course material was removed or reduced after the strike. One group of students stated that the removal was not harmful, because it consisted of non-core material, or material irrelevant to their current program. Another group felt that the removal of material was harmful to them, especially concerning math/calculus, chemistry, and English grammar and essay writing.

Slightly over 20% said that the strike had a negative impact on their ability or motivation to obtain an education beyond the secondary level. They referred to either lower grades, loss of study habits, or lower desire to obtain further education. References were made about many other students, who, so claimed the students in our sample, had dropped out of high school during the strike. These latter students would not be in our sample, but would be part of one of the other research projects (Watson, 1978). Many students stated that the strike had its greatest impact on 'average or borderline' students. Subgroup analysis revealed that students with lower grades in the high school year (based on self reports) were more likely to report a negative impact of the strike. The problems of establishing the causal relationship between the strike, and its perceived impact are discussed in the report.

The subgroup analyses showed that there were only a few differences across groups. Students from the three strike locations did not differ in their perceptions of the impact of the strike. Nor did students differ according to whether they went on to University, Ryerson degree programs or Community Colleges. Girls reacted somewhat differently to the strike in that they were more likely to do school related work during the strike, and to make an effort to make up for time lost when they returned to school after the strike. They report a slightly lower negative impact than boys. We also found that students whose parents were at the highest occupational level (on a scale based on income and education) reported less of an impact.

On the general questions about high school, about one-third of the sample did not think that high school adequately met their educational requirements. Changes in how English grammar is taught, in independent study and essay and exam writing, in teacher/student relationships, and in the high school guidance counselling program were suggested.

Finally, over 90% of the students expressed very positive attitudes about the research study itself because they thought that it was essential to study the impact from the students' points of view. They also stated that students' concerns were ignored at the time of the strike, and that they appreciated the opportunity to state their opinions.

It must be stressed that we do not have longitudinal or comparative data. We cannot compare grade 12 and 13 students who went into the work force with those who continued to post-secondary institutions. Nor do we have information on students from grades 9-11. We do, however, have a good representative sample of grade 12 and 13 students who went on to post-secondary work. The report as a whole should be read, particularly the large number of comments in the students' own words, in order to obtain a full understanding of the attitudes and perceptions of the students. The data presented in this report should contribute to an understanding of the meaning of teacher strikes for students.

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CHAPTER 1 INTRODUCTION

This study is one of three parts of a project contracted by the Ontario Ministry of Education to the Ontario Institute for Studies in Education to examine the impact of teacher strikes in Ontario on students. The other two parts analyze impact on the rate of entry into post secondary institutions and on dropouts (Watson, 1978) and the impact on student achievement (Holmes, 1978). Our study investigates *attitudes and perceptions* of students toward the strike experience and its consequences. In this introduction we describe briefly (I) the nature and difficulties with the initial research design, (II) the final research design and profiles of the three site locations which we studied, (III) our assumptions and approach in doing the research, and (IV) the meaning of the research in terms of caution about interpreting the findings, and about the importance of the study.

I NATURE AND DIFFICULTIES OF THE INITIAL RESEARCH DESIGN

The Metropolitan Toronto High School Teachers' Strike began on November 12, 1975 and ended on January 16, 1976 when the teachers were legislated back to work. On the same day the Minister of Education, Thomas Wells, announced in the legislature that the Ministry was going to contract for a research study to determine the impact of the strike. Mr. Wells said:

> "We will examine the effects of the strike on students' academic progress and achievement, as well as effects on retention rates and entry of students into university and college. We will also try to assess how students' attitudes have been affected by the strike. The results should be of assistance to us all in helping guide future actions and directions in the whole area of collective bargaining in education."

The original design of the study called for an investigation of the impact of the strike on the attitudes and perceptions of students, parents, teachers, administrators and trustees in Metropolitan Toronto. Before the contract was finalized the study was broadened to include other strike locations - Lakehead and Central

Algoma - on the assumption that it would provide a better basis for generalization, if the Toronto situation turned out to be a unique case.* The time frame of the study was also lengthened in order to examine the longer term impact in Metro Toronto one year after the strike, as well as attitudes during the year of the strike.

On April 12, 1976, the research contract was signed and our component of the study simply said:

> "The objectives of the proposed study are: to reveal the perceptions of students, parents, teachers, administrators, and trustees on the impact of the strike on students."

We set out to design the study in a way which would reflect the concerns and ideas of the various groups interested and/or affected by the strike, and which would draw upon existing documents (Board and Teacher position statements, newspaper articles, etc.) and information about the strike, and existing research literature. We were also faced with a very tight time line. If we were to gather any data during the strike year, it had to be done during the three months (April-June) remaining in the school year.

In April, we selected a sample of Metro Toronto schools and began to consult with teacher representatives in Metro Toronto about ideas and concerns for questionnaires and interviews. We immediately experienced strong reservations to the study from Metro Toronto teacher representatives.** We began a series of negotiations to attempt to accommodate their concerns.

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*Other strike locations such as Windsor were excluded because it was thought the turmoil of frequent strikes would prevent the study of attitudes on a large scale without causing more disruption.

**There is some earlier background to the consultation with teachers which is too complicated to go into detail here. Briefly, when the study was first mentioned to us in February we expressed concern that the Teachers' Federation would have to be consulted before proceeding. Following this, in March there was some consultation between Ministry of Education Officials and Teacher Federation Officials at the Provincial level, which resulted in alteration to the design of the study, namely, extending the time line to two years, and including other strike locations. As we found out later, however, there had not been consultation with the larger Provincial Executive, nor were the Metro Toronto representatives involved.

We presented a first draft of the student questionnaire to the Metro Toronto Executive at a meeting in late May in which they decided not to participate in the study "at this time," although it was agreed that we could present a revised plan in the fall. A similar decision not to participate was taken by the full Provincial Executive at a meeting in May. With the teachers' decision, it was impossible to carry out the study of the other groups. For example, in order to draw samples of students and parents, it would be necessary to obtain the cooperation of school boards and high school principals. Some boards would have cooperated, but in most cases the boards and especially the principals were reluctant to endorse the study over teacher opposition, because this would cause further disruption to an already bad year. In any case, we would not enter schools to do the study if the teachers were opposed. Effectively, this meant that we could not gather any data immediately following the strike, i.e. in the academic year in which the strike occurred.

The teachers gave two main reasons for their reservations to the study. First, they claimed that one could not examine or understand the consequences of the strike, without first analyzing the causes and conditions which led up to the strike, and which prolonged it.* Secondly, they said that no matter how our results turned out, they would be used in a biased way by the media and others to attack the teachers. For example, if the study showed no effects, it would be used to say that the teachers are not valuable since nine weeks can be eliminated from the year with no adverse effects. If the study demonstrated that students were harmed, it would be used to argue that the teachers were irresponsible for going on strike.

Following the understanding at our May meeting we met informally in July with some of the teacher representatives, and it was agreed that we would submit a revised plan to the Metro Executive for its meeting in September. We revised the questionnaire based on input from the May meeting with the Executive, as well as on input from others. We also proposed including a chapter on the background to the strike, so that the context of our study would be in perspective.* We also argued that our questionnaire would not just examine impact on learning, but would also gather information on attitudes toward the learning situation, teacher-student relations, teacher morale, and so on which would provide important information for all concerned.

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*Since that time, there has been a study which was directed at these issues (Kervin, 1977).

In September, the new plan was reviewed by the Metro Executive and was turned down. We then considered one final option. Instead of drawing a sample at the high school level, we would select a sample of grade 12 students and grade 13 students in the three strike locations who went on to attend a post-secondary institution (either University, Ryerson or Community College). In this way, the samples would be selected at the post-secondary level and we could investigate the impact of the strike on students who continued their education beyond secondary school.

As researchers we faced some very difficult dilemmas, and questions as to whether the research could be done under the existing conditions in a way that would provide valid information. One major dilemma concerned the question of whether we should do any study on the strike, in light of teachers' reservations. We eliminated large parts of the research because of this. We excluded the sample of parents, students in grades 9-11, administrators and trustees. It would have been too disruptive and in many cases impossible to obtain lists and carry out such a study in the high schools. Nonetheless, we did proceed with the study of grade 12 and grade 13 students for two reasons: 1) we could obtain valid samples, and cooperation from students without causing disruption at the high school level, and 2) for reasons we explain later in this introduction we thought that it was important to gather information on the meaning of the strike from the students' points of view, because they were so directly involved in the strike, and their opinions remained unknown.

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*Kervin (1977) has since included this aspect in his study.

II FINAL RESEARCH DESIGN AND PROFILES OF THE THREE STRIKE LOCATIONS

The details of the research design and corresponding methodology are described in Chapter 2. In summary, we drew two independent samples, one for a questionnaire survey, and one for interviews, from grade 12 and grade 13 students in three strike areas - students who had gone on to Community Colleges, Ryerson or University. The three strike areas were Metro Toronto, Thunder Bay, and Central Algoma. The questionnaire sample consisted of a 10% random sample totalling some 1700 students, and the interview sample consisted of .06% of a random sample for a total of 134 students. Very, very brief profiles of the three strike situations are presented to indicate the timing and duration of the strike, and the reasons for selecting the strike location for study.

Metro Toronto Strike*

The Metro Toronto teachers' strike took place from November 12, 1975 to January 16, 1976 when the teachers were legislated back to work with the settlement to be reached by arbitration - a total of 38 school days were missed. All high schools in the six boroughs of Metro Toronto's public school system went on strike involving some 140 schools, 8,000 teachers and 140,000 students. The Metro Toronto strike was the main impetus for this current study because it affected so many people and lasted so long as to raise the obvious question - Does a strike of this duration adversely affect students?

Thunder Bay Strike

The high school teachers' strike in the Lakehead School Board at Thunder Bay was almost identical in length to the Metro Toronto strike and virtually the same time of year, one year prior to the

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*The details of the Metro Toronto strike are well documented in Kervin, 1977.

Toronto strike. The strike began on November 26, 1974 and ended on February 4, 1975 when agreement was reached between the two sides. The strike involved approximately 10 secondary schools, 575 teachers, and 9500 students. It was preceeded by rotating strikes during October and November 1974. This site was chosen for two reasons. One reason was that it allowed us to examine the longer term effects, two years after the strike, while the Metro Toronto situation was studied one year after the strike. Secondly, it enabled us to examine a strike situation which was similar in length to the Toronto strike, involving fewer people and in a mid size city. This would allow us to have a basis for comparing similarities and differences across site locations.

Central Algoma*

The teachers' strike at Central Algoma took place from February 16, 1976 to April 12, 1976 when the teachers were legislated back to work. A total of 35 school days were missed. There was only one high school in the district. The school is located at Desbarats, a small town near Sault Ste. Marie. There were approximately 40 teachers and 640 students in Central Algoma Secondary School. This site was selected because it was located in a small rural town which would further the basis for comparing the attitudes toward the strike among students in small town situations, mid size cities, and large cities.

III ASSUMPTIONS AND APPROACHES

It is important to analyze the statistical impact of teacher strikes - the number of dropouts compared to previous years, and to non-strike areas, the rate of entry into post-secondary institutions and so on. This is being done in other parts of the project (Watson, 1978). It is equally important and central to our purpose to study the attitudes and perceptions of people involved in strikes. This can be done from the point of view of the main negotiators (as in Kervin, 1977), or it can be done from the viewpoints of everyday participants as we did. Our underlying assumption is that in order to understand the full impact of the strike it is necessary to obtain people's perceptions and interpretations of the various events surrounding the strike period. The meaning of the strike for the rank and file teachers, students and parents may be one of the most important long term consequences to examine because these attitudes could affect people's behavior and motivation in the future. It would be important to find out what students did during the strike, how the strike affected student/teacher relationships, climate in the classroom and the school, teacher morale, parent rapport with teachers, student motivation, and attitudes to education in general. We were not able to proceed with our initial design to include parents, rank and file teachers, and students in grades 9-13. We did, however, collect information from representative samples of grades 12 and 13 students who went on to post-secondary institutions.

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*An article on this strike was written by Martin O'Malley in The Toronto Globe and Mail, April 15, 1976, page 7.

A second reason why it is essential to gather representative information is that there is a tremendous amount of hearsay reports about the attitudes of various groups. Such information - letters to the editor, interviews with small unrepresentative numbers of students, position statements from opposing sides - is reported in the public media and stands as the available information on people's opinions. Information from a representative sample provides a more objective base for understanding the meaning of the strike for the population as a whole.

A third more specific reason for doing the study was that we knew very little about what students thought about the strike. Furthermore, we also assumed that students were not only potential victims of the strike, but also formed an important constituency in their own right whose attitudes and opinions had been a neglected and unknown part of teacher strikes.

A final aspect of our approach concerned the question of which issues to include in the study. The procedures for formulating the questionnaire are explained in chapter two. Essentially, we wanted to obtain ideas from a variety of sources to ensure that the concerns of all groups were included in the questionnaire. To this end, we examined position statements of teacher and board representatives, and with a small group of students, and we examined media accounts of the strike, and research literature on the topic of the impact of strikes. We were open to including any relevant aspect of the strike, as long as the question could be asked in an unbiased manner. The resulting questionnaire covered events during the strike period, short term and long term consequences on motivation, performance and various relationships including reported views of parents (since we were not able to sample parents directly.) In short, we thought that people who were involved in the strike would make a valuable contribution to what should be studied. Our role was to process these various inputs and to decide how they could be investigated.

IV LIMITATIONS AND IMPORTANCE OF THE STUDY

It should be stressed what can be said, and cannot be said about the type of research design we used. Obviously, nothing directly can be said about parents or teachers. It should also be clear that we cannot make any claims regarding students in grades 9-11. Finally, it must be understood that our sample consists of students in grades 12 and 13 who applied to attend a post-secondary institution. Not included in our sample are students who dropped out of school during grade 12 or 13, or who entered the work force instead of proceeding in school. It was impossible to include these people in the sample. However, another part of the project (Watson, 1978) does include a study of dropouts. Our own study also includes several references by respondents to friends who had dropped out, which are reported in our findings. In any case, the reader should be careful not to draw any conclusions other than those applying to grade 12 and grade 13 students who continued their education. At the same time, we do have a very good sample design which should provide the basis for generalizing to the total population of grade 12 and grade 13 students who proceeded to post-secondary institutions.

It should also be clear that we gathered retrospective data one year and two years after the strike. This has both disadvantages and advantages. The main disadvantage is that reports on the events of the time may become vague or less specific through time. The main advantages are that the length of time since the strike allows us to follow up the longer term impact at the post-secondary institution and also place attitudes in more of a perspective in that the emotions of the time have had a chance to pass. Ideally, we would have liked to gather data at the time of the strike, and one and two years after the strike, but this was not possible.

Overall then, the importance of the study is that we were able to gather systematic data from a random sample of students concerning what they did during the strike, how it affected relationships and learning after the strike during the high school year, and what students' attitudes were after they left high school and entered college or university.

In chapter two we describe in more detail our methodology and the nature of the sample. Chapters three to five report the findings of the study. Chapter three consists of the main findings for the survey sample as a whole. Chapter four analyzes subgroup comparisons from the survey sample involving possible differences among the three strike locations, among students attending different types of post-secondary institutions (University, Ryerson or Community College), between sexes, according to parents' occupation and in relation to grade average in the final high school year. Chapter five describes the results from the interview sample on the same issues investigated in the survey study. Chapter six summarizes the main findings of the research, and their implications.

Before turning to the methodology and findings we would like to stress two points. First, what we have done is to obtain and accurately describe the attitudes and perceptions of students. What importance one places on particular findings depends largely on one's values, and as such is not a research question. For example, we can report the attitudes of students, but whether one thinks that attitudes and perceptions are important compared to performance-based measures is another question. Secondly, we caution the reader not to take individual student comments or individual tables out of context and draw conclusions. The findings should be viewed as a whole, and only consistent and related findings should be treated as potentially valid reflections of the patterns of student attitudes.

CHAPTER 2: METHODOLOGY AND SAMPLE

In the introduction we described the events which led to our final research and sample design. In this chapter we focus on the details of the design. This consists of three main parts: (I) methods of establishing the questionnaire, (II) selecting the sample and obtaining data, and (III) data analyses and the characteristics of the final sample.

I METHODS OF ESTABLISHING THE QUESTIONNAIRE

Our overriding purpose in our part of the project was to gather information on the perceptions and interpretations of students to events surrounding the strike and its possible consequences for themselves. In preparing the questionnaire we obtained input from a variety of sources, and obtained reactions and suggestions on various drafts of the questionnaire. We began in April 1976 and developed the final version of the instruments during the remaining nine months of the year, during which time we also carried out various negotiations and procedures to establish the sample. During that period we developed drafts of the questionnaire based on 1) discussions with teacher representatives at the Metro Toronto level concerning the purpose of the study, 2) discussions with principals and teachers in ten schools in our initial sample in Metro Toronto*, 3) a review of research literature on strikes, 4) a content analysis of Board, teacher and Ministry statements on the strike, and of media coverage of the strike, and 5) discussion with our colleagues involved in other parts of the project, and with officials of the Ministry of Education who constituted the supervisory committee for the project. As a result of the ideas and suggestions from these various sources we drafted a preliminary version of the questionnaire which again was presented to the above groups for reaction and approval. In addition to these steps, we pretested the questionnaire with a small number

*These were schools in our initial sample which eventually were eliminated as indicated in the introduction.

of students (N=16) to ascertain whether questions were clear and relevant and to obtain suggestions for other possible questions as well as to find out the length of time required to fill it out.

None of the above sources bear any responsibility for the final form of the questionnaire. For example, the Metro Teachers Executive did not approve the study for reasons already mentioned. Nonetheless, we incorporated their concerns as well as those of others based on reactions to the draft of the questionnaire. The outcome of this process was the questionnaire which is contained in this report as Appendix A. It examined the following aspects of the strike.

(i) Events and Perceptions During the Strike (Section 2 of the questionnaire)
(ii) Events and Perceptions After the Strike (Section 3)
(iii) Attitudes toward Teachers and Toward the Strike (Section 4)
(iv) Secondary School Experience (Section 5)
(v) Background and Situational Characteristics (Sections 1 and 6)

In addition to fixed response or closed ended questions, we also included fourteen open ended questions and requests for comments so that students could elaborate their viewpoints in their own words.

The Interview schedule (Appendix B) which was pretested with ten students was based on the questionnaire because it was intended to probe in more detail in a face to face situation the same aspects of the strike. We also did not know what the rate of return would be on our questionnaire. As it turned out, the questionnaire was far more valuable than the interviews because:

1) We obtained a very high rate of return (74%)
2) The response on the questionnaire was very detailed providing over 10,000 open ended commentaries from the fourteen open questions
3) It was difficult to obtain interviewees from our initial sample selection, and

4) The questionnaire sample, because of the high return and the quality of data is probably the most representative sample. We turn to these issues in the following section.

II SAMPLE SELECTION AND COLLECTION OF THE DATA

The three strike areas to be studied were Metro Toronto, Thunder Bay (Lakehead Board) and Central Algoma (Desbarats near Sault Ste. Marie). The design of the study called for sampling from among students who were in Grade 12 or 13 during the year of the strike and who subsequently entered a post-secondary institution. In two cases (Metro Toronto and Central Algoma) the students were in their first year of post-secondary attendance, while in the other case (Thunder Bay) the students were in their second year of attendance. In the sampling frame we included all the Ontario universities to which the students had applied, and all Community Colleges in the three areas. In order to obtain sufficiently large samples to allow for comparisons and generalizations we selected a 10% random sample of students in Metro Toronto, and because the numbers were so small, the total group in Thunder Bay and Central Algoma. For the interviews, we selected a sample of about .06% in Metro Toronto and larger proportions in the other two locations. The total population, questionnaire and interview sample numbers by institution are contained in Table 2.1.

The procedure for sampling students differed slightly between Universities on the one hand, and Ryerson and Community Colleges on the other. For Universities, we worked with the Council of Ontario Universities because they had a total list of all students who were admitted to Universities in Ontario. In order to protect the confidentiality of students, the Council, based on our specifications, selected a random sample of students by computer, and mailed out the questionnaire and follow-up reminders with return stamped envelopes addressed to us at OISE (Appendix C contains copies of the letter and reminders we sent). As there was not a central source of names for Ryerson and the CAATS we worked

Table 2.1

Total Population, Questionnaire Sample and Interview Sample by Institution

Institution	Population	Questionnaire Sample	Interview
Ontario Universities			
Metro Toronto	6392	636	50
Central Algoma	12	12	4 (Laurentian)
Thunder Bay	245	245	14 (Lakehead)
Ryerson			
Degree	1673	168	9
Non-Degree	565	56	3
Colleges of Applied Arts & Technology			
Metro Toronto			
George Brown	350	35	4
Humber	1345	136	14
Seneca	1259	121	10
Centennial	999	99	10
Algoma			
Sault	23	23	4
Thunder Bay			
Confederation	189	189	12
Totals	13,052	1,720	134

individually with each of the seven institutions to draw random samples from their files.

In mid-February 1977 - one year after the strikes in Metro Toronto and Central Algoma and two years after the strike in Thunder Bay - we began to distribute the questionnaires to all students in the sample. Two follow-ups were sent out at three week intervals. Questionnaires were accepted until mid-June at which time over 74% of the questionnaires had been returned (see Table 2.2). Such a high return from a large random sample using a mailed questionnaire is truly remarkable and much above the usual returns from large samples (which are usually in the 30-50% range). We attribute the high return to the fact, later to be documented, that students found the questionnaire relevant and wanted to express their views on the strike, and to the methods we used which included a letter of explanation, second copies of questionnaires to non-respondents and promises of feedback on the results which we intend to do after the report is released.

The interview sample was selected randomly from lists except in the case of Lakehead University in which we selected students through local contacts because we could not obtain a copy of the total list. The interviews also began in mid-February and continued to late June. Each prospective interviewee was telephoned, informed of the study and the importance of participation, since only a small systematic sample had been chosen. Cooperating students were asked if the interviewer could meet with them at their convenience to complete the interview. In most cases a reminder call was made the night before or the morning of the interview. Obtaining interviews proved to be much more difficult than obtaining questionnaires. Five rounds of additions had to be drawn from lists of students from each institution to obtain the appropriate number of interviews. Often those who agreed to be interviewed did not show up. In some cases heavy workload, essays and exams were the main reasons cited. Table 2.3 contains the number in the final sample. It should be stressed that because of the number of replacements we cannot claim that this sample is completely representative.

Table 2.2

Rate of Response to Questionnaires by University, Ryerson, CAAT's

	Sample*	Returned	Percent Return
Universities	860	659	76%
Ryerson	216	168	78%
CAAT's	515	345	67%
	1591	1172	74%

*The sample consists of the original sample selected (N=1720) minus 129 questionnaires returned as not applicable (i.e., the student had not in fact been a member of the school board in question, or had not attended the post-secondary school in question). It should be noted that the university students refer to those who were accepted for universities in August 1976. A small number of them did not actually enter university which accounts for some of the 'non applicable' returns.

Table 2.3

Rate of Response to Interviews by University, Ryerson, CAAT's

	Sample	Complete*	Percent Return
Universities	68	68	100%
Ryerson	12	12	100%
CAAT's	54	49	91%
	134	129	96%

*Please note that in many cases several rounds of replacement were needed from the original sample.

However, the results in later chapters do not indicate differences from the questionnaire sample and in any case the questionnaire data provide the main base of our findings.

III DATA ANALYSIS AND CHARACTERISTICS OF THE SAMPLE

The questionnaire data have been analyzed by computer using the Statistical Package for Social Sciences. We have computed descriptive results as well as a number of two variable comparisons on relationships as analyzed in Chapter 4. We have also recorded (typed on 3x5 cards) all comments made by students in the open ended questions which amounted to over 10,000 statements. We did a content analysis of all these comments to identify themes and we selected representative samples of statements which we included in the report. This was done by reading all the statements for a given question (usually about 1,000), categorizing the statements by themes, counting the proportion of comments by theme and selecting representative comments for inclusion in the report (see Chapter Three). These statements are particularly valuable because they are rich in detail and contain reasons and explanations in reference to other quantitative data, and are in the student's own words.

Most of the findings are presented as descriptive results on individual questions which indicate the percentage of respondents who participated in a given activity or held a particular viewpoint. When relationships are examined across subgroups we report both the percentage differences and a statistical measure of association. As a rule of thumb, percentage differences of less than 10% were assumed to be insignificant or inconclusive. Differences of 10% and over were considered to be significant and worthwhile to discuss. The measures of association we used were gamma for ordinal variables, and Cramer's V for nominal variables (see Appendix D). As will be seen, however, the main findings involve the descriptive information about the level of activities and attitudes on individual questions rather than the relationships or comparisons between subgroups, although there are a small number of interesting results comparing subgroups (see Chapter 4).

At this time, it is helpful to describe the background and other basic characteristics of the questionnaire sample, before proceeding to the description and analysis in chapter 3 and 4. The numbers of students from Universities, Community Colleges and Ryerson have already been reported. It is also worth noting the distribution by location of strike (Table 2.4). These numbers, of course, reflect the total number of students in the population. For example, there were only a total of 35 students from Central Algoma who graduated from Grade 12 or 13, all of whom were in our sample. With such a small number, it will be difficult to draw any firm conclusions from the analyses of the Central Algoma findings.

There were slightly more females than males in the sample (52% and 48% respectively). Ninety percent of the fathers and 48% of the mothers were working. Occupational level for both groups was measured by means of the revised Blishen scale (Blishen and McRoberts 1976). This scale is based on the combination of income and education, the percentage of those in each occupation whose income and highest year of schooling is over the cut-off points of $6,500 and the fourth year of high school. The scale ranks 500 occupations and ranges from 75.3 for administrators in teaching and related fields to 14.4 for hunting and trapping and related occupations. Only occupations of the male labour force were used by Blishen. However, it is common practice to employ the same scale for the female labour force (omitting the occupation of home-maker) hence the questions to obtain the occupations of the mother and father were phrased in an identical manner. To employ this variable in cross-tabulations, class intervals were created following Blishen's suggestion of basing them on the use of the 10's digit. Using this method, six levels of occupation were created. Table 2.5 shows the frequency distribution by occupational level with illustrative occupations. For example, level one consists mainly of unskilled labourers while level six consists largely of professional workers and senior managers.

Table 2.4

Survey Sample, by Location of Strike

	N
Metro Toronto	849
Thunder Bay	282
Central Algoma	20
	1151
No Response	21
	1172

Table 2.5

Distribution for Father's and Mother's Occupational Level

		No. in Sample		Illustrative Occupational Type
		Father	Mother	
Level 1	Less than 20	13% (129)	17% (107)	(unskilled labour)
2	20.0 - 29.9	19% (186)	17% (106)	(semiskilled [e.g., barbers and farmers])
3	30.0 - 39.9	18% (176)	15% (93)	(semiskilled and junior clerical)
4	40.0 - 49.9	13% (124)	35% (217)	(senior clerical and skilled trades)
5	50.0 - 59.9	28% (276)	13% (78)	(lower managerial)
6	60.0 +	9% (85)	3% (16)	(professional)
		100% (976)	100% (617)	
	No Response	196*	555**	
	Total	1172	1172	

*Some respondents did not give their parents' occupation because they thought it should be private information.

**This figure consists mainly of mothers not working in the labour force.

We also asked about the language spoken at home - 75% of the sample indicated English. The only other groups over 3% were Italian at 10% and Chinese at 4%. These small numbers did not allow us to analyze ethnic group differences.

The interview sample also shows similar proportions by location of strike and male/female. Occupational and ethnic differences were not analyzed.

The findings from the questionnaire sample are presented and discussed in the next two chapters, and the interview data are summarized in Chapter five.

CHAPTER 3 SURVEY FINDINGS: OVERVIEW

The survey data are analyzed in two parts. In this chapter we present an overview of the findings in the following four main sections which correspond to the main aspects of the questionnaire (Appendix A):

I. Events and Perceptions During the Strike
II. Consequences for Learning
III. Consequences for Attitudes toward Teachers and Strikes
IV. General Attitudes toward Secondary School and Toward this Study

In each case we are able to report both quantitative data on the overall percentage of respondents who held a particular viewpoint, and qualitative data (verbatim comments) from open ended questions in which we asked respondents to explain their responses in their own words. The verbatim comments are particularly interesting because they are drawn from some 1000 responses for any given open ended question and enable us to present students' positions in their own words, and to indicate the main themes and their proportions.*

I EVENTS AND PERCEPTIONS DURING THE STRIKE

We were interested to find out from students what they did during the strike and what they thought about it. To this end we asked questions about their various activities (questions 4, 5, Appendix A), what they felt they learned (question 6) and how they felt about being away from school (q. 7).

Table 3.1 contains the information concerning which school related activities, if any, students were engaged in while the strike was on. It can be seen that 44% of the students carried

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*Although we have used only a small proportion of student comments we have included in this chapter a large number of comments because they so vividly describe student views. Some readers may wish to skim some sections of comments, but to obtain a full picture the student statements are well worth reading in full. Also, we have not corrected spelling or grammar mistakes or done other editing, because we wanted to retain exactly what the students had written.

Table 3.1

School Related Activities
Carried out on a Regular Basis
During the Strike

No activities	44%	(493)
Globe	2%	(22)
School Assignments	28%	(326)
Independent Study	38%	(440)
Tutor	5%	(57)
Transfer	1%	(16)
Miscellaneous	8%	(89)
		(1443)

Percentages do not add to 100 because students could be involved in more than one activity.

out no form of school related learning during the strike (and thus 56% did). Of those who did carry out some other activities on a regular basis, a high percentage were involved in independent study (38%) and school assignments (28%). Very few students pursued other options such as using tutors, transferring to another school, etc. (less than 5%).

Among those students who did engage in some regular learning activities, we found that 33% (N=217) reported that the activities were moderately helpful or helpful to a great extent. This means that approximately 19% of the total sample (217 of 1172) reported that they experienced helpful school related activities during the course of the strike.

We also examined a more qualitative aspect of learning which may be seen as an unintended consequence of strikes, namely the question:

> Did you learn anything during the strike which you would not ordinarily have learned about in school?

A large number of students (40%) indicated that they did indeed learn other things. In order to understand fully the meaning and seriousness of these matters we asked students to comment on this question.

There were four themes in the comments concerning:

1) Perceptions of Teachers
2) Lack of Learning/Boredom
3) Independence
4) Knowledge of Work and Jobs

1) Perceptions of Teachers

The most frequent theme mentioned by students concerned their disillusionment with teachers as in the following sample of opinions.

> Yes, I learned that most people or a large number of them are two faced. This realization came about in what the teachers taught, and their acts were. We are taught to think as individuals for the good of ourselves as well as others, somewhere the teachers missed their own messages.
>
> I have discovered that a great many teachers do not have the education of their students at heart. I saw our "educators" in an entirely new light; many appeared as hypocrites and of course, sheep, "following the mass herd."
>
> Teachers are not very professional. (wanted money, better standards etc.) and said they didn't want students to suffer, but we did -And they didn't care -- very rebellious when we came back - depending on the teachers they made the classroom a horrible place to be - they constantly made defensive, childish comments, therefore lowered themselves in my esteem.
>
> I learned that the students became political pawns. I was dismayed by the teachers' attitude toward the students - they didn't care. It was good exposure to a strike situation, a lesson in politics.
>
> That the teachers were, in effect not concerned with anything but "fattening their wallets." This includes complete abandonment of the students, their needs, and their welfare.
>
> Before the strike I was quite close to several of my teachers and had a great deal of respect for them. I believed they were genuinely concerned with the future of us as their students but obviously I was disillusioned. The strike had a profound effect on my attitude towards teachers and the educational system in general.
>
> It gave me a completely different perspective on the teachers. I found some of their attitudes, selfish, and

> unconcerned. I learned that the sincerity which supposedly exists in teachers was not present.
>
> People's attitudes seem to always be reflected around self-concern and money. This was only brought out to me at the time of the teachers' strike when our future had no relevance to their careers. In other words they didn't really care what was to happen to us, only themselves.
>
> That no one really cares about education and its values, not even the teachers.
>
> Yes. The strike taught me about people. I had a fairly cynical view of people but thought the teachers were different in some other way. I found out they were as mercenary and greedy as any other group of individuals anywhere.
>
> I continued to read newspapers and to keep current with news items. I feel that I learned a lot more about the teachers at that time than I learned from them.
>
> That the teachers became totally different people when they're on the picket line. That "dedication" to students was then all shot to hell and they were only interested in their money, not us.

2) Lack of Learning/Boredom

Many students commented that the time was a holiday, although many of these students found it to be very boring.

> I would get up around 11 a.m. every day and have breakfast, then lunch at 2. My spare time during the day would be spent watching TV, something I do not do at all during the regular school year. In the evenings I'd go out, so in effect I didn't learn anything, and didn't care to.
>
> You don't learn much, loitering around your house for weeks on end.
>
> Being out of school was not as great as I thought it would be.
>
> I learned that having nothing to do isn't all it's cracked up to be. You can get having too much leisure time unless you can use it constructively.
>
> I learned what it is like to be bored, climbing the walls, I went to look for a job but didn't find one!

> I assume you are talking about academic learning; I did no school work on my own during this time. Also, none of my close friends did anything in this respect either.

3) Independence

Although many students found the strike to be wasteful and boring, a small number of students reported that they learned to become more self-disciplined and independent.

> During the strike, I was forced to learn how to work more independently and consequently my own self-discipline increased.

> Learning to be more responsible regarding school work. Realized I should work regardless of the strike. Also the different ways in which the teachers felt towards the students.

> I learned how to work independently. Without classes to attend, I could spend more time on essays and research and followup on things which I found interesting.

> Yes, I learned how to cope by myself. Educate myself, not be dependent upon others.

> Carrying out your own independent studying was an enrichment experience. I found time to explore ways of study in more intensity so the homework work load was no longer as pressing.

> I learned that it is possible for students to organize themselves reasonably well when teachers aren't around.

A few mentioned the realization of how dependent they were on the school:

> I learned that I enjoy school (at this point in time) more than working. I also found out that I am not the type of person who can work very well independently when it comes to school work. I need someone to "push" me, as I feel most students do at this age.

> I realized that teachers are forcing students to learn and without them many would not learn or educate themselves at all.

4) Work and Jobs

Finally, several other students experienced for the first time the world of work. Most of this experience was revealing to students leading to a greater appreciation of the need for education and in a couple of cases to greater maturity.

> It gave me an opportunity to work full time at a sales clerk job and taught me the value of education. I couldn't perceive working that way the rest of my life.
>
> I learned the value of a good education and how hard it was to find a job. It made you want to stay in school longer than working in a factory like I did.
>
> I had to get a job during the strike to keep from becoming bored or creating conflicts at home. The job I got taught me a lot about the working or "real" world which school seemed so far removed from. I was glad to have this experience and when I returned to school, I felt that I had matured in a way, compared to my friends who had not worked.
>
> I got a better idea about what it would be like working full time. School puts you in an imaginary type of world which is apart from the real world. During the strike, I got a taste of the real world and real responsibilities.
>
> I learned what a miserable existence many people lead because they work at jobs they are unsuited for or because they do not have a higher education to elevate themselves to other jobs.
>
> Yes, I most strongly learnt that I did not wish to work any longer and was anxious to return to school.
>
> I worked on an assembly line for only a few hours. It was easy to see that if I didn't finish school this was where I might end up. I hated every single second of it!

One student, perhaps naively, in this day of frequent government reorganization said:

> I worked for a moving van firm and helped move government offices.

A second major aspect of what went on during the strike concerned the question of how much students worked at jobs during the strike. As Table 3.2 indicates 45% worked less than 6 hours a week, 14% worked 6 to 11 hours, 14% worked from 12 to 18 hours, and 26% worked over 18 hours a week. In other words, one-quarter of the sample worked at least a 50% work week, although we do not know how this compares with their usual work habits. Most students, however, worked very little.

Finally, one very interesting question concerns whether students missed being away from school (Table 3.3). Forty-four percent reported that they missed being at school, 18% were glad to be away, 19% didn't care, and 20% made qualified statements. The meaning of these responses are clarified by the students in their own words.

Of those who missed being at school there were two types of concerns:

1) Worry about Time Lost
2) Missing the Social Atmosphere/Sports (and the counterpart boredom)

Those who were glad to be away talked mainly about the opportunity to relax. Illustrative comments concerning all three themes are presented below.

1) Worry about Time Lost

By far the most frequent comment referred to worry about missing valuable time, and/or to resentment toward teachers because of lost time.

> Worried. Since most of my friends did not attend the same school that I did, I did not miss the "social life" during the strike, nor did I have a particular attachment to the school. I was simply extremely worried and frustrated that I was missing important weeks of school and as a result I was worried that I might not be able to graduate.

> At first I was glad to be away for a few days because I thought it would be a short strike. As the strike began to look like it was going to be a long one, I started wishing I was back in school. I began to worry about whether we would return in time before a whole year of school would be wasted. I also worried about whether I'd have much trouble getting into university. I was also getting bored at the time.

> I feel the strike for me was a waste of time. Why did my studies have to suffer because of the strike. I was losing valuable school time and I couldn't do anything about it. The strike hurt my studies and my marks.

Table 3.2

Hours Per Week Spent Working For Money During the Strike

0 - 6 hours per week	45%	(512)
6 - 12 hours per week	14	(162)
12 - 18 hours per week	14	(163)
Over 18 hours per week	26	(299)
	99%	(1136)
	No response	36
	Total	1172

Table 3.3

Feelings Toward Being Away From School During the Strike

I Missed the School	44%	(469)
I Was Glad to be Away	18	(187)
I Didn't Care One Way or the Other	19	(198)
Other (Missed some aspects, but not others)	20	(214)
	101%	(1068)
	No response	104
	Total	1172

Although being away from school felt great at first, I knew in the long run it was going to hurt.

I felt I was losing valuable time by not having the teachers available. At that time, I had just applied to get into university and the course I had chosen was very competitive to get accepted into. I thought I was less qualified to enter university because I would not have as great a background in some areas as a person who had covered the subject matter in more detail without being subjected to a long strike.

I missed the school primarily because my future was on the line. Being in the final year I had no idea of whether or not I would lose a year.

In the beginning, the strike was a holiday from homework. However within a few weeks I became increasingly aware of all the subject information I was missing. This then made me feel afraid because I wasn't sure whether I would gain entrance into University.

I missed the school because I realized how important it is for me. Independent study was very difficult without guidelines, objectives and some instruction.

I was extremely worried since I didn't know whether we would be accepted into the Universities. I wanted to get back to school as soon as possible. Our working habits deteriorated the longer the strike extended.

As a result of the strike, I could not get back into my old studying and working habits as a result of only concentrating on school work only a few hours of the week.

I felt that missing school would affect my university education and it did. The areas we missed during the strike were taken for granted in university.

It was frustrating to have to sit at home when I wanted to get the semester finished so I could work for the last half of the year to earn money for university. No one wanted to hire a student for an indefinite period so I couldn't make use of the time.

At the time of the strike I was appreciative of the spare time from school. It was not until university that I regretted it.

School is important, especially when you are in Grade 13, and trying to get accepted into university. My marks

> dropped drastically, therefore I didn't meet the entrance requirements of some universities.
>
> At first I was glad to be away, as I'm sure most students were, then I gradually became more and more discouraged as I felt trapped, trying to decide to stick it out till the strike finished, or to quit school altogether and work. (My friends, parents, convinced me to finish grade 13)
>
> Grade 13 was my most important year. I was having trouble enough keeping up with the work load without worrying about a teachers' strike. The situation made me very angry.
>
> I was very worried about losing my year and upset that it didn't bother the teachers as much as it should have
>
> The more I missed, the less interested in school I became. I needed my Grade 12 to enable me to be accepted at a community college.
>
> I was glad for a break but in grade 13 it almost cost me my year. It just made it harder to file for any post-secondary education. I never wanted to see my teachers again. I hated that school for several reasons, this just amplified my feelings.
>
> I feel we attend school for an education. High school up to the age of 16 is mandatory for students and thus I feel it should be mandatory for teachers. I feel the teachers are more interested in their personal gains than in the aspect of very good teachers. If the teachers don't care about good & effecient education why should the students.

2) Missing the Social Atmosphere/Sports (Boredom)

Other students, although much smaller in number compared to the first category, said that they missed the school and/or were very bored with the time off.

> I missed the athletic and social activities at school as well as having work to keep my brain working and to keep from getting bored. There was very little to do during the daytime during the strike.
>
> At first it was great to have a holiday but where the holiday got to be too long I missed the school, the atmosphere and even the ordinary routine.

I missed the curriculum as well as the social events. I became very bored and lazy during the strike.

I became bored. I didn't obtain a job because I kept hoping school would start soon.

Two weeks away from school would have been a nice break but 2 months is a whole different thing. I became terribly bored and couldn't wait to return after about 3 wks. of the strike.

I didn't miss school as such but I found myself bored at times and I realized that no matter how much I hated school at times it was - is a useful and necessary thing.

Because of the strike all of our extra curricular activities were cancelled i.e. (basketball, volleyball). As a result I missed out on the volleyball and badminton season.

First, when the teachers went on strike, I thought - great, a vacation but afterwards I got bored at home doing nothing. I missed the classrooms, teachers and friends. Education was never that dull or boring, only sometimes!

I really missed school. At times I did not know what to do. I got tired of job hunting, tired of television, and especially tired of staying at home.

3) Happy to be Away

Among the 18% who were glad to be away, the following remarks were typical:

My marks were fairly high, so I didn't worry about it.

Every since September of 1975 school wasn't the same as the teachers were contemplating a strike. We weren't learning very much and school was very slack in general. The atmosphere was unbelievable.

I enjoy free time and I didn't miss anything.

I have always found school boring, so I was glad to get away from it.

I was glad because of the tension in the school. The environment was not a learning environment

My gladness came from being assured in the media that it was a temporary thing and I didn't believe it would hurt me. It was like a summer vacation except in cold weather and I enjoyed it.

To summarize the events during the strike period, almost half of the students (44%) did not do any regular school related activities, and only a minority of the remaining students reported that what they did was helpful. Only 19% of the total sample stated that they were involved in helpful learning activities during the strike. Most students did not work at jobs for more than a few hours a week, partly because it was difficult to find jobs and the duration was uncertain. When asked what they learned during the strike and what they thought about the time off, the most frequent comments referred to a growing lack of respect for teachers, worry about the loss of education, boredom, and for some, the development of independence and for others the realization of how dependent they were on the school, and how much they valued education in comparison to going into the work force with limited education. A small percentage (18%) were pleased to be away from school.

II CONSEQUENCES OF THE STRIKE FOR LEARNING

We attempted to examine several direct and indirect consequences of the strike on the quality of learning, again as reported by students. These included questions on whether the curriculum was reduced, and if so, how much in each subject area, the impact of any removal on their current post-secondary work, whether the respondent, other students and teachers made an effort to make up for lost time when they returned to school after the strike, whether students worried about graduating, getting post-secondary admission, keeping up in university or college, and whether they have undertaken remedial work. We also asked for self-reported grades for the last high school year completed (i.e. the year of the strike), and the mid-term grades of the current post-secondary year. As an overall report on how the strike affected them, we asked students whether they thought the strike affected their ability or motivation to obtain an education beyond the secondary level, and we asked them to explain in their own words the meaning of this possible impact, and any other comments they wished to make on the strike. Now let us turn to the results.

Reduction of Material/Preparation for University/College

Almost three quarters of the sample (74%) stated that teachers did remove material from the course when school resumed, 11% did not know, and only 15% reported that material was not removed.

Within the main subject areas we tried to determine what percentage of the curriculum was removed. As might be expected, students do not have adequate knowledge of course outlines to give accurate information, so the data on the percentage removed should be viewed with caution. The full information is displayed in Table 3.4. A high percentage of students did not answer probably either because they did not know exactly how much had been reduced, or because they were not taking the subject specified. In the main subject areas of English, Science, Social Science or Math, approximately 10% of the total sample reported that over 20% of the curriculum (usually from 20-35%) was removed. On the average, another 15% indicated that 10-20% of the curriculum was removed. The precise accuracy of these figures is questionnable, since students probably do not know the total curriculum outline, and hence how much is removed. Many teachers do, however, provide students with a general outline of the course, and we have reason to believe from the interviews with students that teachers did discuss removal of material with students. In summary, most students did experience removal of at least some material from the curriculum. The exact percentage is open to question.

Table 3.4

Percentage of Curriculum Removed by Subject

Subject	No Answer/ Don't Know	0-10% Removed	11-20% Removed	Over 20% Removed	Total
English	47%	26%	16%	11%	100%
Foreign Languages	81	11	5	4	100
Physical and Biological Sciences	56	21	14	9	100
Social Sciences	61	19	12	9	100
Mathematics	52	25	14	10	100
Technical Subjects	88	6	3	3	100

Total Sample 1172

It is even more difficult to determine if the removal had any detrimental effects. As one subjective means of investigating this possibility, we asked students to discuss in their own words whether they thought there were any detrimental effects (see Appendix A question 12c). We received 781 comments from the 846 students or 74% who had indicated that there was removal of material. A content analysis of these comments indicated that 434 or 55% stated that there were no detrimental effects, 288 or 37% claimed that there were adverse effects on some subjects, and 59 or 8% were not sure.

1) No adverse effects

Most students who indicated no adverse effects gave one of two reasons - either that reduction had no effect because the grade 12 or 13 subjects they were taking were not necessary or relevant to their current post-secondary program, or that the material removed was extra or supplemental material that was not necessary anyhow.

> I do not believe so, because in my case, only studying languages, certain works were either omitted or covered more quickly by seminar work and independent study. Being in the same line of study at University, I find that nothing was missed, for in the Foreign Languages, all grammar was amply studied. In English, it is not cumulative, therefore the omission has not had an effect on my university English courses.

> NO!!! Which is what bothers me, and what made me so apathetic about the whole thing. It didn't make any difference really to what I was doing. So why bother?

> No. Most of the subjects I am now taking are introductory and have very little to do with the subjects taken in grade 13.

> No, it has not, The teachers said that they would not remove any material that would harm our studies at University, etc. They stated that they would teach as the most important material in the specific course.

> I don't know exactly how much reduction was made, but I think we made up most of what we miss. I don't think there would be any effects on the performance in college because the first semester is mostly review from high school.

> No - none at all since now I realize that I'm in University that high school doesn't compare & doesn't really prepare you for university. This doesn't apply only to students who experienced the strike since I've heard this same comment from students (many) every year who experience this same transition.
>
> None whatsoever. Mainly some 'extras' were cut out such as field trips. Also anything that wasn't particularly relevant was taken out.
>
> No as of yet. However I felt cheated and rushed The pressure on us was far more than needed to prepare us for college or university. I believe the rate of work doubled despite a reduction in course material, because we still handed in the same amount of assignments and tests, so the teachers would have marks.
>
> Reduction of course material was mostly quantitative, not qualitative and I therefore think that this removal of material did not cause any detrimental effects. For example, in English, if the skill of essay writing has been grasped, then it does not matter whether one or more books are excluded from the course.
>
> In my opinion, Gr 13 serves no preparatory purpose for University. Therefore, any reduction in material has had no visible effect.
>
> No. The courses don't seem to prepare one in a practical way for university to begin with -- so, whether a "full" or "part" - course, there seems to be very little difference.
>
> No, but the reason for this is because the courses I am taking in university are not the ones in which I lost course material in high school.
>
> No, not really. If we missed it in high school we took it in college. In college they really teach from basics so what we missed was not important.

2) Adverse Effects of Reduction

There were 288 or 37% who claimed that the reduction of material was harmful, especially in math/calculus, chemistry and some in English. Many students also claimed that they had to work harder in University to make up for omitted material. It should be repeated at this time that the comments are based on the subjective perceptions and feelings of students.

Most certainly - My calculus was a necessary course for my university calculus and as it was, this year most of the other kids had taken the background for much of the computations that we did. Therefore, it was twice as hard for me to pass the course.

Most definitely! I was not able to complete subjects that most others students could. It had a gross effect on my marks due to the large amount of very rapid "review" of #13 maths which was all totally new to me.

My functions class was doing so poorly after the strike - we wrote exams - 95% failure - that we started from page 1 in Jan. and went over all the material again. Tests were given each week on 2 Chapter. Consequently, we never did get the book finished.
Now that I'm at university those lost pages are hurting me in Geography labs when we are doing problems.
Other students have an advantage over me when it comes to this. It seems that I'm always going for extra help.

Yes. The reduction of material in math and the speed at which the remainder was covered left me with a poor knowledge of calculus. Because of this I couldn't keep up to 1st year calculus at U of T.

Yes. I am taking sciences, mathematics, which are subjects that build on previous learning. I have found, especially in math, that the material we skipped as a result of the strike is necessary, and I have had to really work hard to learn this, while keeping up with the university material.

There are no detrimental effects because I am an arts students. There are, however, big gaps in my background in some subjects areas. The teachers, however, bent over backwards to make things easy. My gr. 13 mark was inflated and my work habits are still poor because of an easy year.

Yes, in my Biology and History courses there is material which should have been covered last year. Consequently, I am behind those students who didn't attend Metro high schools.

Yes. Chemistry labs were abolished after the strike, and much emphasis in first year University Chemistry is on lab performance. Also, much of the theory in Calculus and Functions was omitted because of the shortage of time. Some sections such as matrices were completely ignored. Therefore, Calculus, this year is more difficult than it should be as the emphasis here, is on theory.

There are certain areas in which students from non-"strike" schools are better prepared for university. The professors, of course, are in no position to compensate for the material missed in secondary school. This leaves us (the Toronto students) at a disadvantage.

Especially for English. I've found that the extra practice in essay writing, analyzing poetry would have been of greater help to me this year.

They neglected grammar altogether in English - I really do poorly in essays because of poor sentence structure etc. I needed those grammar lessons.

Yes in the subject of mathematics. I feel at a loss not knowing basic materials expected by professors. Their courses are outlined for students who have a full background in mathematics, as students without a strike received in previous years.

Yes, Math has suffered greatly! Sciences haven't suffered at all yet! I don't understand how they could catch up on weeks of lost school without normally teaching a lot of irrelevant information.

Yes, I really feel hard to catch up with some of my classmates. I found out that I didn't know some of the material which they've learned before, and really feel frustrated sometimes.

I failed my first semester at University. Need any more comment?

Yes, I took Grade 13 Calculus, 40% of the course was rushed, and 30% was deleted. That left 30% taught properly. My marks are suffering.

Yes. Prior to the strike my marks were sufficient to an Ontario scholarhip. My marks in math dropped radically and I am feeling the effect of the material not convered during the strike this year.

Definitely: being a chemistry major I have found that my chemistry background is decidely lacking as compared to high school graduates from other parts of the country. Things I should be familiar with are new.

For me personally the strike caused me to be unprepared for my 1st year of university and I failed it. I believe it was partly because I had a soft (not much work) Grade 13 and wasn't prepared for the heavy 1st yr. workload.

> Yes, it has been detrimental. The reduction of course material left me behind the other students in university. I have found that because of the reduction of course material my marks in university have dropped considerably (78% to 55%).

> Yes. We completed only 2/3 of grade 13 physics and I cannot really estimate how much calculus we lost. I failed first year physics and calculus and am repeating them now. I do not say that this is a direct result of the strike, but I can say that it played an important role.

> I find myself lacking a great deal in English and writing-related subjects. Other students in my course coming from outside Toronto seem to have been much more thoroughly prepared for a university curriculum.

> Yes it affected my mathematics course very much that I now feel so upset and do not know how I am going to solve this problem I am trying so hard but in some way I seem to be last because of the work we missed during the strike and the course

> There have been detrimental affects on my performance, because of the strike. I did not think I was fully qualified to go on to university especially since I was taking a maths & science course in high school. I didn't feel that I had a sound grasp of the subjects I was taking. Going to university and doing poorly would shatter my ambitions & goals, so I opted to go to Ryerson, & then get a job once I feel secure again I'll go back to university, My educational background in maths & sciences is not really designed for a Business course at Ryerson.

> Yes, I felt that what time was lost had completely lost what interest I had at once had. Consequently when school began I had forgot most of what we had taken. It was much harder to get back on track.

> The fact that I did not participate in French certainly had an effect on my performance. Enough progress could not be made because we just did not have the required amount of time to practice.

Remedial Work/Preparation for Post-Secondary Work

When we asked students whether they had undertaken any remedial work during their current post-secondary year, 11% said yes. Of these 11%, 70% (N=129) said that the work was not a result of the teachers' strike, while 30% (N=55) claimed that it was. To recalculate this for the total sample, only 55 students (5% of the total sample) claimed that they took remedial work because of the strike, although as we have seen, many others had indicated that the strike had affected them.

A related but more general question was asked about whether students felt adequately prepared for their university or college year. Thirty-one percent stated that they felt "not at all" or only "a little" prepared for the year. This is probably a general commentary on the interface between secondary school and post-secondary education, as well as a commentary on the lack of preparation related to the strike. In either case almost one-third of the students do not feel prepared for the transition. Both explanations are elaborated by students in their own words.

> Time will tell. I wrote no exams last year and I haven't written any yet this year. They are, however, worth 50% and as I haven't written an exam for 2 yrs - they frighten me.

> At the beginning of the year, I felt well-prepared in such courses as English because I have a very good background in that subject However, as the year progressed, I got farther and farther behind due to a failure on my part to adapt to the university workload. It was something unheard of in high school. In that respect I was unprepared.

> I found University a shock and am still having a hard time adjusting. High school does not prepare the students for University at all.

> University was a totally different environment and academically - frightening. High School (no matter what anyone says) does not prepare you for this change. I was therefore not prepared in any way for University - socially to academically.

> In the beginning of the university year I didn't think it would effect me, but after writing the University Christmas exams I realized how not writing one exam the whole year before effected me. I was out of practice.

> I don't feel that high school prepares you for the workload in university. This feeling really has nothing to do with the strike.

> Not knowing what to expect, I found that there was a lot more work to keep up with. I think that if I had worked steadily throughout the year, that I would have been better prepared.
>
> High School subjects seem totally unrelated to that of University courses. I felt very inadequate and out of place. As if I had no background rather than 13 years of it.
>
> I didn't feel prepared in English and feel cheated of any education in grammar.
>
> Again, I felt the independance helped. University demands just this, and the strike was almost helpful.
>
> Workload in University is about 4 times the workload I had in Gr 13. My study habits were bad, and my essay writing was terrible. I feel high schools do not effectively prepare students for University. Essays are a must in University.
>
> I have had no problems except in the area of English. The professors tend to feel that all students are illiterate these days. But no attempts are made in English class to deal with any grammar or language problems, or to help us with essay writing.
>
> Like I said high school is kindergarten. They spoon feed you to death. There was no real preparation for university independent learning.
>
> Again, although, we were given our credits as promised, they were almost worthless. Many courses were incompleted or if they were, were hastily skimed over.
>
> In high school you are never prepared for the transition from high school to university. There you must do everything for yourself whereas in high school you are usually spoon fed.

Make-Up for Lost Time

A series of questions were directed at whether students and teachers made an extra effort either inside the classroom, or outside, to make up for time lost during the strike. If we dichotomize the results into those reporting "not at all" or "a little," on the one hand, and those reporting "moderate" or "very much" of an effort on the other hand, we can summarize the data more easily.

Inside the classroom, 61% of the students reported that they themselves made an extra effort, 43% reported that they thought other students did also, and 61% thought that teachers made such an effort (Table 3.5). In short, most students felt that they, personally, and teachers made extra efforts to make up for lost time in their class work. Thus, students perceived teachers to be making more of an effort than was the case for other students (61% to 43%). However, a large minority (40%) of students and teachers (as perceived by students) did little or nothing to make up for the lost time.

Outside the classroom, 47% of the students reported that they increased their work to make up for lost time, while the remaining 53% stated that they did little or nothing extra (Table not shown).

Concerns about Graduation, Admission, Keeping Up

We asked students to report retrospectively about how concerned they were about school success both just after the strike, and toward the end of the school strike year in May. As might be expected, there was a lessening of concern by May compared to just after the strike. The percentages themselves are of interest (Table 3.6). For example, if we again dichotomize the information into "not at all" and "a little" versus "moderately" and "very much" we find the following. Just after the strike, 48% of the students were worried about graduating, compared to 24% in May of the strike year. The reduction of 24% is important to note, as is the finding that one quarter of the sample was worried about graduating in May, including 14% who were very worried. We should point out that we do not know if this is related to the strike, although we have direct statements related to the strike which will be reported shortly.

The findings on admission and keeping up are similar, 54% just after the strike were worried about admission compared to 35% in May, while 40% just after the strike were worried about keeping up, compared to 33% in May. The reduction on this question is not very large because at that time (May of the strike year) students still didn't know how they would fare in post-secondary work.

Table 3.5

Efforts in the Classroom to Make Up for Lost Time By Respondent, Students, and Teachers Following The Strike (as perceived by respondent)

	Not at All/ A Little%	Moderately/ Very Much %	No Response	Total
By Respondent	39% (441)	61% (676)	5 (55)	1172
By Other Students	57% (650)	43% (482)	3 (40)	1172
By Teacher	39% (438)	61% (685)	4 (49)	1172

Table 3.6

Percent of Students Worried About Graduating, About Admission into Post-Secondary, About Keeping Up At Post-Secondary as Perceived at Two Points In Time (Just After the Strike/May of the Strike Year*)

	Worried About					
	Graduating		Admission		Keeping Up	
	Just After	May	Just After	May	Just After	May
Moderately/ Very Much	48%	24%	54%	35%	40%	33%
Not at All/ A Little	52%	76%	46%	65%	60%	67%
	100%	100%	100%	100%	100%	100%

*The two points in time refer to retrospective perceptions of students.

In section IV we return to the general question of secondary school experience in relation to post-secondary university.

Grade averages for the high school year compared to the post-secondary mid-term averages are very difficult to compare because grading is so subjective in the first place, compounded by self-reports of students, and the fact that we were only able to obtain mid-term grades at the time of our study. With these cautions in mind we can say that the pattern of grade averages was approximately the same for the two years (Table 3.7).

Finally, we attempted to gather explicit information on the students' perception of the impact of the strike on their ability or motivation to obtain education beyond the secondary school level (Table 3.8). Seventy-nine percent (N=900) indicated that there was no serious effect on them personally. The remaining 21% (N=232) indicated that they were directly affected by the strike. This is a noteworthy finding when we consider that our sample consists of "successes" in that they are students who did proceed to post-secondary education, and does not include students who left grade 12 and 13 and went into the work force or unemployment. In other words, if 21% of the relatively successful population was affected adversely the effect on students who did not continue may be greater (as many of the open ended comments reported below indicate). It is still an open question whether students are using the strike as a scapegoat, but it may reveal some of their thinking if we examine in detail their own comments on the impact of the strike.

The comments concern the possible impact of the strike on "ability or motivation" for further education (Appendix A, question 17). Students who said that the strike did affect their motivation referred to lowered motivation for education, lazy and undisciplined study habits, lowered respect for teachers and for education, lowered grades and ability in certain subjects, or friends quitting school because of the strike. These "negative" comments came mainly from the 21% (N=232) who answered "yes" to the question on effect of the strike, although many comments came from other students who said no regarding personal effects, but yes regarding friends.

Table 3.7

Reported Grade Averages at End of Last High School Year, and Mid-Term Post-Secondary

Grade	Last High School Year	Mid-Term Post-Sec.
50-59	4% (43)	7% (62)
60-69	33% (387)	30% (305)
70-79	39% (455)	45% (459)
80-84	14% (157)	11% (125)
85+	10% (116)	7% (66)
	100% (1158)	100% (1017)
No Response	14	155
TOTAL	1172	1172

Gamma = .236

Table 3.8

Percent Who Felt that Strike Affected Ability or Motivation for Post-Secondary Education

Yes	21% (232)
No	79% (900)
	100% (1132)
No Response	40
TOTAL	1172

A small number of students (about 3% of the total sample - N=35) said that the strike affected them in a positive way.

A third cluster of comments which came from those who answered "no" consisted largely of statements claiming that something like a strike could not affect basic motivation, unless it wasn't there in the first place, and that students who blame the strike are scapegoating.

Representative statements from students regarding each of these three types of comments are presented in the following pages. Students who answered "yes" tended to make more elaborate comments than students who indicated no effect - many of the latter simply said, "No it didn't affect me."

1) Yes, Negative Effect (for themselves, or others/ comments largely from the 21% answering "Yes"). It must be remembered that the following comments are representative of the 21% of the survey sample who reported experiencing negative effects, and other students who reported that friends had dropped out.

> Many students (I know of about 15) dropped out during the strike, or just after. These are kids that may have failed or dropped out anyway, but the strike was just the right push to make those that may have stayed on give up. I thought this was a shame, and that it was the teachers' fault.
>
> Because of the strike I only lost my respect for the teachers.
>
> It definitely has affected my ability due to the lack of knowledge. Also the "who cares" attitude of it all has affected my motivation.
>
> Yes it has made a significant impact on my motivation in university. As a result of the strike, my initiative was greatly reduced.
>
> When I came back after the strike I noticed several people missing. Obviously they had become fed up and were probably out working or looking for a job. But the strike did not affect me in this way. I was worried at first that it might harm my chances for getting accepted into university but it didn't.
>
> After the strike, my marks dropped on the average by 10%. I got used to and accepted working for these lower standard marks and now regret it this because I have lost a great deal of my motivation to achieve "good high" marks.

I do feel however the teachers after the high school strike marked a lot easier on tests. They were marking it easier to get through. I feel I've been cheated.

It almost did. Near the latter part of the strike, I felt it being dragged out too long and that it would be impossible to make up for loss time. (Plus the fact of being bored at home.) I went out and found a job. If it hadn't have been for some of my friends I wouldn't have gone back and never would have got to University.

The strike made me a very lazy person. Once back in school I simply wanted to get the year over with. I never concentrated on the subjects to my fullest potential. This laziness on my part has had a bad effect on my present schooling. Being in university I'm responsible to take the iniative and work on my own, however, I can't seem to find the iniative I seemed to have lost my motivation somehow through the strike.

There are some students who are capable to do very well no matter what the circumstances. They are the lucky ones. The rest of us will carry the scars, the bitterness, and the strong feelings the teachers' strike left behind for the rest of our lives.

I'm dropping out of University at the end of this year I do not hold the academic system as highly as I once did. I don't think this is entirely due to the strike, but it helped. It did not hinder my ability, only my motivation.

During the strike I thought it might of, but now it seems so far behind me. The only thing I can think of that might of hurt my motivation was the thought of the teachers not being as concerned about the welfare of their students as I had always idealized. It was a bit difficult working for people you had begun to lose respect for.

I believe not so much my ability as my motivation many times during the strike I thought of quitting and either going out to work or to go to a private trade school. Sometimes even this year I'm not sure I did the right thing in going to university. The work in the courses was condensed and we missed a lot a work that did not seem important then, but this year it would have been better for all of us if we had learned it.

My average went down drastically after the strike from 85% to 60%. Could not get myself to work again. Lost all motivation. Also, because I knew University only looked at first term marks, so I didn't really try hard to pull myself out of the rut.

The strike did not effect me at all. But many of my friends gave up waiting an started working. This lead to them liking work and they had no motivation to return to school "maybe next year."

I was seriously thinking of becoming a secondary school teacher, but because of the strike I decided I wanted nothing to do with the teaching profession.

My motivation has been lowered considerably because my ability is less. I find myself having to do work that should have been previously known in order to solve today's assignments. This lack of knowledge accounts considerably for the decline in my grades. Because of the "extra" work my motivation is lower and I tend to give up more easily. This too lowers my grades.

It has definitely affected my sense of motivation. During high school -- especially until the strike I had a regular study program and had a future goal of being a teacher myself. I now feel that if they can so easily just eliminate parts of our courses without worrying, what good is it in the first place.

No, as I took the same course as I intend to take before the strike, but I had a lot of friends who dropped out and therefore didn't get Grade 13. This was bad, because I can think of three of them who were "B" students, and who did intend to go to university before the strike, but they got tired of waiting.

In some ways my motivation was lowered considerably. I got to the point I really didn't care about school. The teachers didn't really seem to care about us. They showed this by striking so it was quite frustrating. A lot of people didn't go back to school. At the time it affected my motivation but I don't think it affected my ability all that much.

It hasn't effected me personally but I knew of several instances where bright, promising students haven't returned to school after the strike because they found permanent employment during the strike.

The only thing it did change however is that a few universities I would have liked to go to wouldn't accept me because my Grade 13 was not complete. It's too bad they felt that way because as far as I was concerned the diploma I would have received after those 4 remaining months of high school was not worth very much in reality.

The only thing the strike did was make you take a second look at the teachers. You realize that a lot of them are out only for the money in their pockets while a few are there for the students.

I lost much of my own self-confidence and my faith in education. I felt inadequately prepared when I got to university, and mentally, I was. Adjustment was extremely difficult.

I found myself becoming a lazy person. I didn't care. I figured who needed it. But I went to university and lasted 7 months, then I quit. I was so use to not working during the strike, I slacked off in university, which is something you just don't do. I definitely have to say it affected me drastically.

I feel that by working from Feb. to Sept. I lost my study methods. I couldn't get into university work. (I failed my first year) I had to repeat.

It affected my motivation to go on to grade 13. After returning to school from the strike, I was very turned off and wanted to get out of highschool as soon as possible.

What the teachers' strike did was motivate me to leave high school sooner then I was to. I was fed up with the teachers and the way many of them felt sorry for themselves.

It sure did. Until the strike, I was taking some grade 13 courses as well as 12. But after the strike I did not want to go to grade 13 anymore.

The strike has given me a negative attitude towards the entire educational system.

The course which I'm presently enrolled in is one of extreme competition. Since many of the students are already experienced, I often feel very intimidated as I only have half of the adequate grade 13 education.

Yes, I feel it has made me distrustful of the education process - if they don't care, why should I?

I come from a school of high scholastic achievements. The standards were very high. Because of the strike when I was in grade 13, I felt my chances of entering university was limited. However, because I had a better understanding of my work in grade 12, I decided to go to Ryerson where I know I am well prepared.

Yes it has. I flunked grade 13. I had great hopes of going to university but I couldn't go. I was just an average student in high school and the two month strike made it impossible for me to catch up and pass the year. The teachers were cramming all the work we missed into the last remaining months.

I failed calculus due to this strike, therefore I am not in university - instead I'm wasting a year at Ryerson. Emotionally, I felt defeated, but Ryerson was a second chance, I guess.

It has not directly affected me but I do know some people who didn't come back because they found a good job, or intended to go back to do the year over again. "What a Waste"

All of the work was crammed into the students, with little or no time spent correcting or analyzing errors. I was pretty fed up with the whole education system and was going to quit. If another strike were to occur at my school now I feel I would rather quit than go through the whole ordeal again.

Personally it did not effect my drive but I had one class of 40-45 students which was reduced to 15 after the strike - they all quit school!

Yes, because I had planned to go onto University, but by not having enough schooling, I had to go to college instead.

Now I am attending a Community College and not a University Program.

I feel that in general marks were lower than what they would have been had the strike not occurred. This definitely effects entrance to university. It also causes many students to drop out.

Actually I don't know. While the strike was on I contemplated my future and decided that Grade 12 would be high enough rather than the Grade 13 I had planned on. Upon return to school I finished the 1st semester and had

> completed my Grade 12 at this point. I do know that without the strike I would have finished Grade 13.
>
> The effects of the strike were damaging. I know quite a few people who dropped out while the strike was on and didn't return to classes when it was over. Before the strike I was planning to go to university but my motivation to go dropped right down as a result of the strike. I don't feel I learned as much as I could have in Gr. 13. The strike was too much of an interruption. It seemed as if we had to start over once it was over and the teachers didn't have much enthusiasm.

2) Positive Effect

A small number of students reported that the strike had actually increased their motivation and ability.

> It has enhanced it. I realized how much I prefer to work independently and not have to take any more high school crap. I skipped a lot more school after the strike than before, because I found I liked working on my own, and going to classes when I didn't understand things or was getting behind.
>
> Yes, in a positive sense. During the strike I evaluated my reasons for pursuing education, and now have a more clear idea of the value I place upon it and how hard I am willing to work for it.
>
> I've learned that your education is your responsibility. It shouldn't be left in the hands of others. In university this year I find that most of my work I do on my own, so perhaps the strike did serve some purpose.
>
> In fact it did the opposite. One needs motivation to work on your own in University and I developed this during the 2 months we were out of school.
>
> I feel that the strike opened my eyes to the fact that someday I will have to work on my own such as in university and I feel I gained a lot of self motivation.
>
> The strike gave me more motivation to obtain an education beyond the secondary school level, because I was determined not to let a group of teachers spoil my chances from obtaining my goals.

> My primary concern during the strike was that I be able to successfully obtain all that I needed for my degree, by the end of the year. The strike made me want to pursue my education more, not less (it made me realize its value).
>
> I think if anything, it made me realize how important an education is to me. Not so much the learning, the theories or the case studies but rather the broadening of my own mind. The only thing that really bothered me was the fact that 13 now seems to be a farce.
>
> As a matter of fact it helped to open my eyes to see how important school really was to me and how my future plans would be based on getting an education.
>
> Yes. It has increased my motivation, because I realize learning is for my own benefit.
>
> As stated before, it helped to motivate my initiative. The onus on the student to do the work. Developed better work habits.

3) No Effect

The majority of students (79%) indicated the strike had not affected their ability or motivation regarding post-secondary schooling, although only a small proportion of these students expanded on their response. Some of those who elaborated expressed it as follows:

> I think anyone who says yes and blames their dropping out on the strike was just looking for an excuse. If it only takes that much discouragement, obviously the desire to go on was not there in the first place.
>
> I think students in general are simply using the strike as an excuse for lack of motivation.
>
> If you are determined enough you will get an education no matter what happens to you. If you can be affected by a teachers' strike, I don't think you have the motivation in the first place to get an education.
>
> I wrote 'I don't know' because I don't think anyone can really tell at this point in time. I know that I am not very well motivated this year in University but I could not say whether it was due to the strike last year or just simply because I'm not interested in working hard at studying.

No. I think that this assumption is really stretching things. The strike offered the students great setbacks in learning - but these were obstacles that could certainly be overcome, with the application of additional and hard work. Students that complain of this problem, I suspect, are really just bitter about the strike and haven't put themselves to any real work or self-improvement.

At first it did have a strong effect. I was discouraged and felt that universities would turn me down because my marks were lower than usual. I found later that the amount of material missed was quite small, and that if one wanted to, he/she could catch up. It took awhile to get motivated, and I think this was the main reason for a drop in marks.

I, however, know of some cases where it has, which was unfortunate. Those people however were very non-goal oriented and didn't know what they wanted to do anyways. I suggest that they would have dropped out anyways and used the strike as an excuse.

No, it has not affected me as I have always had a desire to do a specific thing and I won't (and wouldn't) let too much stop me. I felt that the teachers were being very inconsiderate to the students because there were a lot of students I know of that were greatly affected.

My decision to seek education past secondary school was up to me solely, and would not be affected by outside circumstances. There is no reason why a teachers' strike should affect my will to learn and increase my knowledge.

The strike has not affected my ability to continue my education, even though it might have been one of the reasons why I was not accepted at the University of Waterloo.

There are some who I feel use the strike merely as a scapegoat. They say that the strike completely knocked them off their feet and that without it they would have done better and gone on. I feel that if you didn't have the motivation to go on before the strike either.

I don't think so but I know that quite a few students would disagree with me.

I was pretty much decided on what I planned to do after I finished highschool, and I always enjoyed school. I don't think the strike had any effect on my ability or motivation to further my education. This is just a personal view. I know of many people who's plans were disrupted by the strike.

> It has not affected my ability/motivation to obtain an education beyond the secondary school level but it has affected the way in which I will go about obtaining my further education. In this I mean that I will not depend or trust teachers as I used to, I depend on myself only.

In summary, the following conclusions seem warranted:

(i) Most students (79%) did not feel that they were directly affected.

(ii) Of those that said they were affected (21%), most stated that their motivation was lowered, or their ability suffered in some subjects, or their respect for teachers, and education was lowered.

(iii) Many students both among those affected and those not affected claimed that it caused many other students to quit, especially average students. Since we only have relatively "successful" students in our sample, we do not have direct evidence of the extent to which other students did leave.* On the other hand, the frequency of comments stating that other students dropped out indicates that there is some basis for this conclusion.

(iv) Some of those who were not affected suggested that students who blamed adverse outcomes on the strike were scapegoating, and wouldn't have succeeded in any case. For themselves, they said that motivation is something that students have independent of any strike.

(v) A small number of students claimed that the strike increased their motivation and self discipline for independent study.

III CONSEQUENCES OF THE STRIKE FOR ATTITUDES TOWARD TEACHERS AND TOWARDS STRIKES

There are two aspects to the examination of the impact of the strike on the broader learning environment and consequences One relates directly to attitudes to the teacher and to the "social climate" in terms of student/teacher relationships, and parent/teacher relationships. The other area involves attitudes toward the strike itself - both in terms of the specific strike in question as well as in terms of attitudes toward teacher strikes in general.

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*The statistical analyses and interviews conducted by Dr. Watson in another part of this study should provide direct information on this question.

Attitudes Toward Teachers

Let us first discuss the quantitative results. Table 3.9 presents a composite picture of the perceptions of teachers "before," "after" and "now" regarding five polarities - concerned vs. indifferent, deserving vs. greedy, hardworking vs. lazy, reasonable vs. complaining, independent vs. "boss-led (Appendix A question 35-37). These items were selected because they represented common adjectives used in the media to characterize teachers during the strike (Bureau of Municipal Research, 1976). We wanted to find out how everyday students viewed their teachers in relation to those characteristics.

Table 3.9

Student Perceptions of their Teachers
Over Three Points in Time*

	Before the Strike		After the Strike		Now (In Retrosp.)	
**	% positive	% negative	% positive	% negative	% positive	% negative
concerned vs. indifferent	64	9	46	27	50	19
deserving vs. greedy	50	11	37	23	41	15
hardworking vs. lazy	43	20	39	27	41	23
reasonable vs. complaining	58	14	44	24	48	15
aware vs. boss-led	46	22	40	25	41	22

*All three points in time are _retrospective_ perceptions

**Percentages are rounded to closest whole no. Numbers are derived from a 5 point scale with 1 and 2 on the one hand and 4 and 5 on the other being combined to form the 2 polarities and 3 the centre point being omitted. The latter is not presented because it would clutter the table. It can be derived for any item by adding the positive and negative percentages and subtracting from 100.

First, concerning perceptions *before* the strike, about half the students on the average viewed their teachers in positive terms (43% to 64% column one, table 3.9) and only a small percentage were negative (9% to 22%). For example, 64% indicated that teachers were "concerned and caring," and 43% saw them as "hardworking" while only 9% viewed teachers as "uncaring or indifferent," and 20% as "lazy and spoiled by a soft job."

Second, concerning recollections at the time just *after* the strike, it is clear that there was a substantial change in positive perceptions of the teachers in terms of the "caring/uncaring" "deserving/greedy" and "reasonable/complaining" dimensions. Thus, the percent viewing teachers as concerned and caring decreased from 64% to 46%. Correspondingly the percentage of negative opinions on this same dimension (indifferent and uncaring) increased from 9% to 27%.

Third, "now" (at the time the questionnaire was filled out) the data show that students have slightly more positive feelings than just after the strike, but still lower than they were before the strike. The overall difference from before the strike is 14% (64 vs 50) on the caring and concerned dimension, 9% on the question of deserving (50 vs. 41) and 10% in regard to reasonable/complaining (58 vs. 48).

It should be stressed once more that the various perceptions were retrospective views of students. However, in light of the numerous qualitative comments about teachers presented earlier and those obtained from other questions soon to be discussed, there is no question that the attitudes toward teachers were definitely lowered on the part of many students

Two other questions provide additional quantitative information on students perceptions of the "helpfulness" and "friendliness" of teachers after the strike compared with before (Appendix A, questions 31 and 32). Table 3.10 summarizes the results for these two questions. A higher percentage of students found teachers more helpful than less helpful (27% vs. 17%), but a lower percentage indicated that teachers were more friendly than less friendly (10% vs. 18%). In combination with other quantitative data (e.g. Table 3.5 re teacher effort) and qualitative data (student comments)

Table 3.10

Perception of Teachers in Terms of Helpfulness/Friendliness After The Strike Compared With Before (in Percentages)

	More	Same	Less	No response	Total N
Helpful	27% (303)	56%(616)	17%(192)	61	1172
Friendly	10% (109)	72%(809)	18%(205)	49	1172

it appears that students felt that more teachers than not were helpful and tried to make up for time lost, but that more teachers than not were seen as less friendly and had lost respect in the eyes of many students.

A content analysis of open ended comments regarding questions 26 and 34 (Appendix A) shows that approximately 15-20% of the total sample (over 200 students) said that their respect for teachers had been lowered as a result of the strike and teacher insensitivity to student welfare and concerns. Several other open ended comments indicated that teachers were just as helpful as before. Many other students said that some teachers were more helpful while others were less helpful. Others simply said "no further comments." Students' own statements about teachers are presented in some detail in the following pages because they reveal the nature of student feelings so vividly.

> My teachers seemed indifferent towards the outcome of the remainder of the school year in respect to the students' positions. To some extent they appeared to be venting their strike frustrations on the students themselves. The arrogant spirit of the strike carried through the remainder of the year in the classroom, and not without a corresponding loss of respect for the teachers as a group amongst students.
>
> I didn't like the teachers' attitude after the strike. Since their demands were not granted they took everything out on the students. They were disinterested and they would not give any help to students. The above statements apply only to some of the teachers.
>
> I felt during the strike, that the actions of the teachers was not in keeping with what I had always believed teachers

to be. I still feel that the strike went on far too long, and that if the same situation occurs again in future yrs., there should be a one month limit on the duration of the strike.

I feel that the real losers of the strike were the students. I found much of the material in various courses were more difficult to pick up with eg. class discussions and teachers elaborations.

It was a terribly unfortunate period in Toronto's school history. I feel that the result of the strike will not die out from our minds, the students, nor our parents hence, there is going to be quite a lot of resentment against the educational system now and in the future.

They seemed distant and some apathetic. The majority of my teachers were reluctant to discuss the strike. Perhaps it was for the best that they remained closed mouth for the one or two who did voice their opinions only lowered my high degree of respect for them. They were very rude at times.

I do feel it was unfair to jeopardize our university acceptance by the teachers strike. Some of our teachers kept reminding us of the strike and telling us how much they suffered, they failed to realize we suffered too. Several of my friends quit school and have either returned this year or stayed out. The marks in the end turned out better than expected and I felt the teachers were quite fair regarding this.

It was an unfortunate situation and I was one of the most effected from it. But it has taught me to take a good look at what people say, especially teachers.

I had a great deal of respect for my teachers. I do not condemn them for going on strike. As far as I know not all of them wanted to go on strike but they really didn't have any choice.

As a result of the strike, I felt considerable frustration and also resentment toward the teachers. I felt that the teachers were insentitive to the student's feelings.

Personally, the antagonism directed towards the students was unecessary as well as detrimental. My respect for teachers as a whole diminished as I felt myself to be the object of hatred by the teachers.

I would just like to say that I sincerly hope it never happens again. It is especially harmful to Gr 13 students.

My attitude towards the teachers never changed. I have and always will look up to them for information and guidance. I can understand their bitterness and hurt feelings as a result of the strike. I thought that the press and some of the people just didn't see or understand the teachers' position. They have cared about the students all their lives and devote many hours to them. They spend after school hours marking or setting schedules. They spend their break times helping students with troubles etc. All the extra time and effort that seem to go with the job just never seemed to be considered. I hold no grudge towards them. I wish others would not too.

I lost a lot of respect for my teachers because their strike hurt me personally and my interest in school tremendously.

Are teachers that necessary? Or why spend 9 months in high school (a school year) if the work can be accomplished in 6 or 7 months? I think the whole secondary school system should be revised. A lot of students dropped out and failed because of the fear of not being able to cope. In University now a lot of us (strike victims) are at a slight disadvantage, but are not in a position to blame teachers for this deficiency that could have resulted in inefficient teaching too!

The teachers had the chance to get over 30% raise but decided not to go along with elementary school teachers. They dug their own grave but pulled students in because of their stupid mistake.

The effects of the teachers' strike were mainly psychological. The attitudes and actions of the teacher's changed after the strike. Many felt bitter and their frustrations were mirrored in their attitudes. Due to this some students dropped out. Whose interest in education was marginal and this was the last straw.

I feel that the greatest loss related to the strike were athletic and social activities at school. I believe that they are an integral part of high school life (especially the senior years) and by missing out on them we missed out on a very important aspect of our education.

I feel the detremental effects of the strike on students was over estimated. I don't feel we missed that much work due to the strike as both students and teachers in my classes worked extremely hard to make up most of what had been lost--and I feel basically they succeeded.

Yes I support and supported the teachers at all times, because of my great respect for them, and because of my agreement with their demands for rights. But I feel that their attitude after the strike, in which they denied to perform any extra-curricular activities most unfair. We students (innocent I should add) had had enough. The denial of after-school activities was most un-called for.

I feel that the worst outcome of the strike was the change in students' attitudes towards their teachers. Before the strike (I speak of my own school of course), teachers had a great deal of respect and also there was a high degree of friendliness and camaderie between the staff and students. This was lost forever in the bitterness and hard feelings that occurred during and after the strike.

I do not think that the strike affected those who had ambition and wanted to carry on their edication. The others said 'What's the use?' and quit. That is bad for grade 13 education is better than 12, when looking for a job. The teachers were wrong and should not be allowed to strike.

My own opinion of teachers has been lowered considerably because of the strike I at one time thought teachers felt a little more responsible toward the "moral" side of their job, but I guess I was wrong. Teachers set values for their students, values which their students are going to carry with them as they grow older. I just wish they (teachers) could show us a better example to follow.

Yes. Teachers' strikes should be discouraged since they demoralize society - at large. The unfortunate truth that schooling is a largely farcical and ineffective exercise becomes apparent and people begin to wonder at the high amounts of tax money which are poured into it for so little return. Irony aside, perhaps this revelation will lead to reform and improvement.

I think next time when teachers think of their own rights they should consider the rights of the students also. They should know how hard it is on them not to have any help when they really need it.

It drove some of the students away and also made the students hate school and the teachers

Not really, except the obvious fact that a strike is going to hurt those students who need the time to learn most, whereas the top students won't really be hurt.

I feel that it is very important that teachers maintain the respect of there students and that there actions last year virtually destroyed this respect for students that were graduating last year.

Not really, except that I feel from talking to many people and from my own thoughts, that the strike left a negative impression towards teachers. They are no longer respected to the extent that they once were. This is because they allowed to many kids to be free with nothing to do when they should have been in school. The teachers wanted more in money terms but actually lost out in terms of respect.

The teachers strike would have succeeded if it hadn't been for the very negative public opinion and the lack of knowledge on the part of the students. One thing I felt very strong about and was very negative was the lack on the part of the teachers to get in touch with the students of grade 13 to help them during the strike We were not what they were striking against.

If the teachers can take off two months and still teach almost everything they were supposed to teach, there sure must be something wrong with the system

Just before the strike, there were times when the radio or newspaper would say something concerning the teachers, and they (the teachers) would just fly off in a rampage. Some actually came into the classroom and literally yelled at us, telling us exactly what they thought of the general news media. I know teachers are only human, but there are certain times when I feel it would have been better to keep their mouths shut.

Just that I felt then, and now that for educated people, there was no need for a strike that was as disruptive as this. Many people left school or went away to other schools, and this hurt many of them. All in all, I don't feel teachers will be able to reestablish their position of high standing in society.

I know my attitude changed quite a bit. I remember being so frustrated that I went home crying. I am not usually an emotional person but I felt trapped. I wanted very much to go up and yell and scream at my teachers but I realized the futility of any such actions.

The teachers put out a great effort to make up for the damage they had caused, but some people who had intended to continue to university, quit school and left town. Since then, I do not know any that have come to university or finished Grade 13.

I guess I have kind of a "why us?" attitude. Why did we have to be the ones to be used as scapegoats by the two parties involved. I can see both parties had their reasons for doing what they did. I realize they did not want to hurt us, but the fact remains, we had our education jeopardized.

Yes, I think that we the students were taken for a ride and that nobody seems to care. I bet a lot of students which finished the year and went on found their background lacking. Also a lot of friends of mine dropped out. That's a year of their life wasted. All the cost of the strike was put on the students.

My attitude, which had always been favourable, changed drastically because of the strike. I began to feel we were regarded as a means to an end. The teachers seemed to me to become a rude, selfish bunch of clods using us, threatening one of our prerogatives as a person (education).

During the strike, I felt extremely bitter towards the teachers. I felt they were indifferent and uncaring towards students and all they were interested in was money. I don't think they realized they were dealing with human's lives and how their actions (the strike) affected us greatly.

I feel cheated, as after the strike all school spirit was gone. Everyone was apathetic and only wanted to finish the year, teachers included. Because teachers refused to partake in extra curricular activities we were robbed of important sentimental rememberings such as a year book and a proper graduation service. Everything was rushed and a time in our lives that should be remembered as a special time, isn't.

The teachers strike affected the students going to college and university. The overall attitude between students and teachers became very reserved and even hostile.

I hope that such a strike shall never be repeated. I think some of us would have gained more without the strike, I personally feel I've lost a lot of confidence in our educational system.

Good holiday for those of us that could handle going back. Too bad for those others

The strike had been a great disaster in my life The fact that it decreased my motivation in proceeding into university. Also coming back from the strike was the worse part in that the teachers were going crazy trying to cram everything into half the year. I found the work load was too much. The marks that I received was way below what I could have achieved if I had the whole academic year.

I think they gave us a very bad example on what should have been done on a situation like that, students sometimes learn from teachers feelings.

After the strike, the teachers were quite willing to help us with extra work. They knew that we were the ones (the students) that got most of the damage. Not the government nor the public but we the students

They carried it too far and forced the borderline people to fail or quit.

There is just one thing I would like to add and that is that I think the whole high school system is screwed up. Some teachers are great as teachers and justly deserve higher pay but then there are others who are such poor teachers that they shouldn't even be receiving the present wage. Instead of arguing over money why don't both sides clean up the system. Money isn't everything.

I think a lot of grade 13 students suffered since they cut out exams. School time was generally not lost but what if the Christmas break was not in that time? I lost my grade 13 year but I really don't think the strike had anything to do with it other than making people and myself lazy and lost interest in the teachers and the school.

It bothers me that the teachers missed a couple of months of school and that the time they missed wasn't of great value or necessity. When a student misses a class or a week of school they get a lecture about how important it is to attend every class, every day. Obviously the time missed isn't that important.

I think the teachers should take into consideration the students in grades 12 & 13, that are involved. Our marks are crucial in those years. Many of my friends quit, or are back again for grade 13. A WASTED YEAR for us.

The memories of the strike aren't pleasant ones. I know too many people who dropped out because they didn't think they could make it through the year after such a long interruption.

A couple of my teachers were on the defensive and refused to talk about it. We were told we were not to mention it at school and it was all "Hush-Hush." It makes it very hard to be silent about something as serious as this.

I feel that too many people use and are still using the teachers' strike as a crutch. People's inadequacies in different subjects are being blamed on the strike and perhaps they should look back on past performances and their true answer is right there

After the strike I lost nearly all the respect I had for my teachers. Most of the teachers tried to pursuade the students that striking was justified. Some students that disagreed with what the teachers were doing found that the teachers were rude or ignoring them Many teachers agreed with those students who were against the strike.

On the question of school funding, overcrowding of classrooms, and other associated budget matters, our teachers seemed to be paragons of virtue in insisting that their only concern was in stemming the falling quality of education. When it came to the question of fattening their wallets, the quality of education seemed to be the last thing on their minds.

The strike only helped to prove to me what a terrible education system we have. How can irresponsible people (teachers) possibly teach kids to be responsible citizens?

After the strike teacher's blamed the students making them feel very guilty. I felt that "we" (the students) were to blame, because the teachers didn't get what they wanted

I feel instead of the teachers striking, they should try to improve their teaching methods, learn to understand the student, and should try to have the feelings and consideration for the students they teach. I feel the teachers are inadequate to teach.

We see teachers as only being people who teach us We sometimes forget that they have families, morgages and other responsibilities. We don't see them as individuals but as a group. They did what they did because they thought they were right and justified in doing it. Teaching is their job and they should get paid properly for doing it.

I thought their methods of attaining their goals were cheap and selfish. I lost all respect for them as a whole.

I and my parents are bitterly opposed to the teachers I studied under last year. I still burn when I think of how petty and low I think they are. I feel lied to and cheated, especially when they told us how much they were for us and then promptly went on strike without batting an eye.

As a result of the strike, I have learned that teachers are out for themselves. They demonstrated that they do not honestly care about the students. They knew the strike would hurt the students, but that surely didn't stop them. All they wanted was more money in their pockets as if they weren't getting paid enough already.
Due to the strike I have lost a great deal of respect for teachers and so have many others.

Although I felt the teacher's had good reason to strike I felt that it did make a number of students to leave school that year. The students that did a "drop-out" were ones who needed guidance by teachers. During this strike this was not there and therefore I feel some made a rash decision upon quiting. Maybe these students would have at least finished high school if the strike had not occurred.

The strike was very unfair as far as the students were concerned (especially those in their graduating year). I know I was confused about my future. Many intelligent people dropped out of school in the middle of the year, as a result of the strike, and haven't returned since. It's sad to see a promising future with a university degree go down the drain all because of a few hundred teachers affecting thousands of students.

Above average students had no problem coping with the missed work, but people such as myself (agerage), or below average, found it more difficult to catch up. Is not education the right for everyone.

The strike did change my attitude toward teachers. I am really sorry to see my teachers are (were) such a bunch of hypocrites, and that they are really useless to a student of any ability. My parents have nothing to do with the school, and I'm glad I don't anymore.

The teachers attitudes changed quite a bit. While some merely became apathetic, others were spiteful, bitter and spent classes raving to students about the government instead of teaching, as they had been ordered to.

Teachers attitudes varied some became helpful while some became martyrs.

I feel that the teachers were very poorly led. (FEDERATION). Their leaders manipulated the situation to create the sensational impression that they could and would be the first to beat the governments anti-inflation controls. For this reason my opinion of the Federation is greatly lowered while my opinion of the teachers remains the same as before the strike.

Even though they went on strike I was amazed by the time they took to try to help students on their own time after the strike.

Just that I feel that they lost a lot of respect and if possible a lot of self-respect.

I think the teachers were ashamed of what they were doing - they tried as much as they could to lesson the burden. The teachers were great after the strike.

When we returned to school, I noticed that many of the teachers were bitter and found that many refused to discuss the strike itself. This confused me because they should have fully explained their own attitudes to the students and if the results would affect their teaching performance. However, a few of my teachers realized that acting bitter and mad would affect us and, being good teachers, they put aside their attitudes and continued as they should have

I had been very closely involved with many members of the teaching staff for 4 1/2 years prior to the strike. The strike & the feelings it engendered created a rift between myself and the teaching staff that in many cases I have found it impossible to bridge. I felt more than anything that the trust of the students had been ignored by the teachers as they pursued their interests in the most selfish manner possible.

They, the teachers, felt as if they were robbed and hard done by so they took this attitude out on the students.

> I used to respect teachers and their opinions but now I can't help but look down at them. I really couldn't care less what they have to say. My opinion of the whole educational system has been lowered as a result of the strike.
>
> The teaching profession is much like any profession, you can't help but find a few incompetents. My regret is that I ran into so many, not to say that there weren't good ones. It's just that the narrow minded ones stick in mind. It is a thankless job, and one that never once crossed my mind in my choice of proposed careers.
>
> Before the strike, I felt that teachers were out battling against all odds to give us all a great education. I almost admired them. After the strike I realized that everyone who does a job does it for economic stability (money) and teachers were no exception. New teachers always start with grand schemes to change the educational system but the system always ends up moulding them.

Parents' and Friends' Attitudes

The final set of quantitative information on perceptions of teachers concerns the attitudes of parents and friends.* First, we attempted to determine how frequently respondents talked about the strike with parents, and with friends. For parents, 61% of the respondents said that they talked about the strike weekly or more (39% said occasionally or never). The figure was slightly higher for friends where 70% discussed the strike weekly or more. Table 3.11 (for parents) and Table 3.12 (for friends) provide the information on how supportive parents and other students were towards teachers _during the strike_ and _after the strike_. It is obvious from Table 3.11 that very few parents (as reported by their sons and daughters) supported the teachers during or after the strike. In fact, a majority opposed the teachers during and after the strike (66% and 53% respectively). Note that there was some drop

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*This information should be viewed with caution because it is based on students' perceptions of other people's attitudes. We tried to minimize the distortion by including a 'don't know' category. As we mentioned before, our original plans to include parents in the study were thwarted.

Table 3.11

Perceptions of Parents Support for Teachers During and After the Strike in Percentages*

	During	After
**Supportive	13 (145)	12 (141)
Neutral	15 (176)	24 (275)
***Opposed	66 (753)	53 (597)
Don't Know	6 (66)	11 (119)
	100% (1140)	100% (1140)
No Response	32	32
	1172	1172

*Retrospective Perceptions

**Combined two categories - strongly supportive and supportive

***Combined two categories - strongly opposed and opposed

Table 3.12

Perceptions of Friends' Support for Teachers During and After the Strike in Percentages

	During	After
Supportive	25 (278)	20 (220)
Neutral	25 (280)	32 (353)
Opposed	45 (498)	40 (441)
Don't Know	5 (62)	8 (92)
	100% (1118)	100% (1106)
No Response	52	66
Total	1172	1172

in opposition after the strike, but the level of support remained very low (12%). It is not surprising that many parents were opposed. It is also worthwhile to examine the reasons offered by students as to their parents' attitudes. In the main, most parents objected to the strike because they thought the teachers were jeopardizing their children's education for self-interested reasons. Only a few parents expressed support and when they did it was usually in terms of supporting their goals, but not their methods.

Comments about Parents' Attitudes

> The teachers were more highly paid than ANY other people in the area and they refused negotiations. Being from Northern Ontario, our taxes were sky high already and my parents were quite upset that my chances at a university career were so jeopardized.
>
> They said that maybe the teachers deserved more money but they had no right using us to get it. They felt a lot of kids would fail or drop out because of the strike.
>
> They felt that the teachers should have been an example to society, but weren't. They lost a great deal of faith in the teachers (my parents originate from Eastern Europe where the status of a teacher was always very high - worthy of respect and honour).
>
> Parents tend to criticize the teachers for having their hands out for more money, to deem this wrong, but when the situation is reversed, they (the parents) grab with both hands, just the same. Rubber-band morality.
>
> They felt that using, the withholding of education of children, in order to receive their demands, was a form of blackmail. Although they did understand and sympathize with the teachers' financial position.
>
> Both my mother and father felt that the reasons given by the teachers for the strike were unrealistic and at the expense of millions of innocent students of Ontario.
>
> My parents were strongly opposed to the teachers' strike, thinking it detrimental to the students - especially those with average or below-average capabilities.
>
> My parents were very upset over the strike and felt we were suffering for something not in our control or our fault.

During the strike my parents as well as myself realized that teachers need decent incomes like other professional working people. After the strike, seeing the effect of the two month strike on the students and the whole school atmosphere my parents felt opposed to the teachers because they held out for so long.

My parents were supportive of the teachers and felt that they had a cause for the strike regarding school conditions as well as salaries. But they did not believe that the teachers should fight at the students expense.

In my 5 years of high school I found that there was very little communication between parents and teachers. That should be changed.

I think parents enjoy complaining about how the teachers enjoy the "easy life," with summer vacation, short hours, etc., but the parents wouldn't take the job if their lives depended on it.

They felt that the teachers were losing both their credibility (we want to help the students etc.) and a great deal of respect from the community.

This may be a bit off topic, but I feel that an improvement in the teacher-parent relationship is in order. There seems to be little or no exchange of ideas between parents and the teachers of their children.

My parents were very concerned about my education and my chance at continuing it. Because as a student I was powerless in doing anything about the circumstances, my parents blamed the teachers for jeopardizing my education for their own self interest.

Supportive of the teachers because, I suppose they have been in the same positions in their jobs themselves so they could sympathize with the teachers and the problems they face not only at this time, but when they returned to the classroom.

My parents sympathized with the teachers (demands etc.). However, they did not agree with the strike approach that they adopted. They thought it was selfish and irresponsible.

There should be more communication between the two groups -- and that doesn't mean Parents night either. Maybe if there had been more of this both sides would have understood each others' side.

My parents were particularly irritated by the fact that the teachers did not organize a meeting where they could explain their views to the parents, my parents approached the teachers from my particular school on this point yet they (teachers) showed no interest. My parents were willing to listen - to change their views but the teachers were not interested.

My parents felt that some of my teachers were certainly deserving of a raise in their salary; but that there were also many unsatisfactory teachers that were not. Therefore, my parents felt it was ridiculous for a mass strike and mass increase in wages, at the cost of their students losing a year.

They were very upset that their child's educational future could be drastically upset by a group who (they thought) were supposed to have their child's best interests at heart. They also felt that the teacher's were foolish and greedy not to take the settlement originally offered then.

My parents understood the demands the teachers were making but they didn't think that the method they undertook in achieving them was valid or fair. They didn't like the thought of the students suffering to service the teacher's cause.

My parents at the beginning were at the side of my teachers but as the strike prolonged they became resentful at the attitude of the teachers about the strike.

My parents were strongly opposed to the strike. They felt they could have gone about it another way. They could not believe (as the teachers stated) that the teachers were concerned with the students, or why would they let the students suffer.

My parents resented the fact that I was out of school. They saw my time going to waste and were fearful that I might not graduate.

My parents thought that the position taken by the teachers, and that their attitude after the strike indicated that most of them had not "buried the hatchet."

My parents seemed to understand the unfairness to teachers and saw through the bad media given during the strike. They also realized and kept in perspective the fact that the strike was carried out 100% legally, and that the appointed mediator also sided with the teachers demands.

They believed that teachers did the wrong thing concerning the strike. In other words, they should have gone about other ways in trying to increase their pay instead of using students.

My parents felt that although the teachers were right in their demands, they went about protesting in the wrong way, by making the students the victims. In short the teachers were concerned with their own welfare and not the futures of the students.

I felt the teachers could have been more understanding with regards to the parents in that they could have taken more time and care in explaining their situations to the parents. I was not impressed with the teachers attitude when they returned. The atmosphere was as if nothing had happened.

They felt that the attitude of the teachers' was extremely irresponsible of people who had held such a high degree of respect from society. They felt that they were now on par with those in the labour force.

My parents felt the teachers were using us in order to achieve their demands. They were gambling with our futures, which they had absolutely no right to do.

My parents thought that the teachers were behaving like selfish children, not like the "professionals" they are supposed to be.

The tactics the teachers used lost them a lot of support that parents (mostly union orientated) would have normally given them.

Probably the main reason for opposition to the teachers was the use of the slogan - "Quality Education for your Children." How could more money suddenly produce more quality?

My parents were afraid that I would lose my year and this took precedence over any sympathy for the teacher's position.

They felt the teachers earned enough money as it was. The quality of teaching today, in their opinion is not what it should be. They were especially upset about the manner in which the teachers used the students for their own personal gains.

> My parent's thought the teachers were making asses of themselves. The teachers looked as if they were a bunch of imature students protesting. My parents believed that the teachers would lose a lot of respect from students and they were right.
>
> The relationship between teachers and parents will never be the same as they were due to the teachers strike. They were more friendly before the strike.
>
> My parents felt that the teachers wanted extra money for less work. They were not filling their expectations as teachers as it was, so why should they get paid more. They felt that the teachers usually don't care about the students, just the money.

Comments about Friends' Attitudes

Fellow students were not seen as being as strongly opposed to teachers as was the case for parents, although there were more opposed than supportive (Table 3.12). After the strike, 20% were supportive compared to 40% who were opposed (the rest were neutral or didn't know). The reasons for the lack of support as well as reasons why some students were more favourable than their parents are contained in the students' own comments. One theme which is frequently mentioned in these comments as well as in others is that students felt that they were being used as "pawns" and that teachers did not care about them.

> My friends' attitudes were varied. Some were or weren't opposed. But after returning to school and finding themselves with a heavy workload, most of them were clearly 'down' on the strike.
>
> People in Gr 13 were more upset about the strike than the students from Gr 9-11.
>
> Most of my friends (like myself) were very supportive of the teachers' demands but were strongly opposed to the strike as a means of achieving those ends. Somehow I think many of us felt betrayed, but after the strike ended all of my friends just wanted to get back to their schoolwork.
>
> We generally felt that the teachers' by their attitudes, had lowered themselves to the ordinary "striker" -- what with the picketing and scrapping over wages etc. Our respect dwindled and for some students, it wasn't the same again afterwards.

Most of my friends sympathized with the teachers but they also felt that it was the wrong way to go about it. Many felt that it would affect their marks and would hinder the year.

My friends felt that the teachers had no consideration for the effects that the strike would have on the students. They seemed only to be concerned with themselves.

We the students were the losers in the strike. After the strike we were still losers. When I reflect on attitudes of teachers today I feel very regretful that I didn't realize their lack of concern before.

After the strike, our attitudes generally became more negative, as we sampled the attitudes of various teachers. They carried on as if nothing happened. They seemed to be aloof.

It affected our chances for University. The calibre of teaching and involvement dropped noticeably and the teachers did not care.

Many of them supported the teachers because they liked the idea of having a holiday. After the strike some of them realized how serious the strike was. How it hindered their education.

They didn't really care during the strike as long as they got school off. They may have been slightly opposed though, since a lot of our teachers did practically nothing already and didn't deserve more $. There were some excellent, devoted teachers though, who had cause to strike. After the strike, our opinions went down because of the teachers' "sarcastic" negative attitude.

My friends were upset at seeing the seemingly "dedicated-to-students" teachers on strike for themselves. After the strike was over, the bitterness was still felt, and we had lost our respect for many of the teachers.

We all liked the strike at first because it gave us a holiday but then when it became so long, we were opposed to it. It might be mentioned that the students agreed with their motives for the strike but did not appreciate the means of achieving their goal.

Some friends supported the teacher's stand and others did not. On the average they were slightly inclined toward the teachers. It may be interesting to note the difference between my friends' opinion of the teachers and my parents' opinion of the same. I think that my friends' personal contact with the teachers and my parents' lack of the same played a major role in the differences of opinion.

The actions and behaviour of the teachers after the strike (i.e. in my school) drove many students against them. (Refusal to supervise extracurricular activities, etc.)

After the strike a lot of work was cut out and no one could figure out how we could miss so much work and have it not matter. Also, a lot of teachers had very bitter feelings towards the students as if it was our fault.

Although they didn't mind the strike, some had reservations as to the consequences of it and felt that the teachers were being irresponsible. Although teachers claim to be professionals, this certainly proves they are not.

Quite a few of my friends were strongly supportive of the teachers, and about the same amount were opposed to the teachers. After the strike, however, the teachers became less helpful so the majority of my friends were strongly opposed to the teachers.

During the strike we were opposed to the idea of being used as a bargaining tool at the expense of our education. The increased opposition after the strike was due to the totally selfish and poor attitudes of many of the teachers when they returned. They had justification to be upset at the back to work order but the students had already suffered enough. There was no need for further abuse.

We had very heated discussion before and after the strike with teachers. The discussions revealed that teachers didn't care what happened to the students, ("thats your problem") and they (the teachers) felt that if they kept the students out of school, the Board of Education would have to give them what they asked for. The teachers' attitude after the strike was bitter and revengeful.

Generally we saw it as the teachers being selfish and hurting our educations for the sake of $ i.e. we felt like we were being used for their blackmail.

Most supported the teachers because they felt the cause was justified -- teachers put in a lot of extra hours that they aren't paid for, with extra-curricular activities, coaching, etc.

It seemed as though many of my friends lost a great deal of respect for the teachers. Also a few of my friends quit school, and began working full time.

Again, the students were angry at everybody. I suppose we were against the teachers because they didn't seem concerned about us, but we were just as angry at the board of education. We did not support or oppose either side.

We were treated as pawns. No one clearly understood why we were the ones suffering because of union dispute.

My friends' attitudes were that of anger, resentment and bitterness regarding the teacher's strike. Being our last year in high school, all were confused whether we would pass or repeat it. None of us felt the teachers were justified in their actions at all.

My friends felt very strongly against the teachers as it seemed that (us) the students were like pawns, just being used, and pushed around for the teachers benefit. Education was not the main issue in this strike, money was and other personal gratuities. And since most reason for strike action was just for teachers profit and not the value of education my friends did not -- will not support the teachers.

Most of us had been involved in sports, with the strike a lot of these activities were curtailed. I imagine this more than anything caused the opposition.

In general the people I talked to enjoyed the "holiday" but were concerned about their year. They concidered the teachers to be acting in their own best intrests, ignoring those of the students.

During the strike, most of my friends supported the teachers but, after the strike, theyopposed the teachers because of their inconsiderateness. The teachers were piling on homework and were teaching lessons at a fenominal rate.

It's easy to be supportive when you're having a 'holiday.' It was another situation when we got back and realized what a different position we were in academically.

Since we were in our final year and anticipating university, we were mostly concerned with getting accepted to the university of our choice. We found the teachers action terribly selfish.

They figured it was a big holiday during the strike and were glad that the teachers were staying out that long. But after the strike they regretted it, because they realize the work they had missed.

> Although the respite from classes was outwardly received with acceptance, sometimes bordering on glee, there was an underlying realization that it would be ultimately harmful.
>
> My Grade 13 friends were angry because this was their most important year too. Many felt scholarships would be out of the question now because we hadn't been in school long enough. After the strike, all the tests became more important. Our work load doubled to make up for lost time. My friends were angry because the teachers weren't prepared for this & we lost more time. Some of my friends never came back to school.
>
> Money isn't everything when you haven't got any and getting shafted indirectly for other people's money cravings is never easy to take.
>
> My friends were in favour of the teacher's collective bargaining power to get better wages and conditions. We knew if the conditions improved, the quality of education could be improved.

B. Attitudes Toward the Strike

We also asked several questions about the students' views of whether teachers were justified in striking, whether they should have the right to strike, and what they thought of the media coverage. Consistent with previous data and as Tables 3.13 and 3.14 show, fewer students supported the strike, and the right to strike than opposed it, although there were mixed feelings expressed by many students. Table 3.13 indicates that 57% felt the teachers were 'not at all' or 'only a little' justified, while Table 3.14 shows that 37% answered "Yes" to the question of the right to strike, 45% said "No" and 18% didn't know. This was clearly a complex topic and students expressed the pros and cons of the issue. It is particularly helpful to know the students' reasons behind their answers as in the following comments representing the three categories of response - Yes, No, Don't Know.

1) Yes, Teachers Should Have the Right (37%)

> They have as much right as anyone to strike. It totally disrupts students, their work and their chances of post-secondary education. But any strike disrupts, *if* others

Table 3.13

Perceptions of Whether Teachers Were Justified To Strike

Not at all/A Little	57%	(645)
Moderately/Very Much	43%	(487)
	100%	(1132)
No Response		40
Total		1172

Table 3.14

Should Teachers Have the Right to Strike

Yes	37%	(425)
No	45%	(511)
Don't Know	19%	(212)
	101%	(1148)
No Response		24
Total		1172

have the right to strike they should also.
There is always an innocent party that gets caught in the middle. There shouldn't be, but there always is.

Teachers should have the right to strike just as much as the other professions; but, they should also consider that many students will give up and drop-out of school, and students will get annoyed with the work to rule and they will refuse to put up with their academic year because they see a feeling of disinterest on the teachers' part.

They should have the right to strike. I believe this on principle. I do not believe that anyone should be denied that right. However, I think that the teacher should consider this right and the effects on students before initiating a strike.

There is no way a person can say yes or no to the RIGHT to strike, for it is their RIGHT to strike, if done legally. What I would like to see is some kind of responsible attitude taken by the teachers toward their students.

Yes, but it should be used as their ultimate weapon. Freedom of expression is a fundamental of the democratic process, but on the other hand, it must be extremely necessary, because they are interfering with the education of students and that shouldn't be tampered with unless absolutely necessary.

They have the legal right to strike. However, it becomes a question of where does one draw the line with regard to the duration of any strike. The teachers' strike was prolonged unnecessarily. After a few negotiations between the Board of Education and the Teachers Union, the strike became not "a means to an end" but an end in itself.

I feel they should have this right but use it only as a last resort for it does affect the attitudes of many students. Those who dropped out may never come back, maybe they would never have gone on, but at least they would have graduated if they hadn't lost hope for the year.

I think every profession should have the right to strike. I understand the teachers' feeling about not being paid much and I agree with them, and I think they should have gone on strike to get what they wanted. But to strike for nine weeks is another story. In my opinion it was a very selfish act, which hurt the students a lot.

Yes they should have the same rights as everyone else. But their actions shouldn't affect the students to the extent which the recent strike did.

They are working people like everyone else and should have the right to bargain for demands in a new contract. The students may be hurt by this, but almost always someone is hurt by a strike.

I feel that anyone in our society should be allowed to voice there disapproval of any situation whether it be a strike, protest, etc. Yet I feel that they also have an obligation to the innocent people which they are affecting.

I regard the right to strike as fundamental for all workers. However in the case of teachers, who, let it be said once again, bear great responsibility, this right, should be strongly tempered, especially when a dispute becomes as protracted as this one, by provisions for mandatory arbitration. Such provisions should become active after such a strikes 4th week.

I feel teachers should have to right to strike. They perform an essential function in our society and I feel they were justified in asking for an increase in their salaries. I feel their talents are underrated.

They have as much right to strike as much as anyone else. If police can strike and firemen then why can't teachers. After all this is a democratic society.

I feel anyone should have the right to strike -- it's part of living in a free,democratic country. But I feel strikes should be the last, the ultimate recourse -- not used as indiscriminately as it has been. I would hope that with serious, sincere negotiating, strikes would never have to arise. This means an honest effort on the parts of both parties involved. Perhaps more consideration should be given to the true victims of strikes.

They should have that right as other groups of professionals do, however, hopefully they respect their profession and their own goals as teachers as far as students are concerned, enough to use striking as a last measure.

Yes I do considering they were getting less than other teachers across the country but their tactics were very selfish and drastic. By putting in jepardy the future of students and the content of their school year they lost a great deal of support they might have had otherwise.

Yes teachers are like anyone else - workers-and I feel that if everything else has failed for them they should be allowed to use the ultimate weapon, a strike.

I think it's only fair that teachers have the right to strike. If they didn't have, how could they negotiate a contract to their liking and needs. Generally, employers don't make a great effort to meet the employee's demands unless they're faced with a problem such as a strike.

2) No, Teachers Should Not Have the Right (45%)

The teachers have no right to waste perhaps 3-4 months of our learning time. They also have a responsibility to the students, and their parents, for the education of the children. I don't think the teachers grievances were valid, and I frankly think that 95% of the teachers today aren't worth what they are paid. I have only known about 3 teachers (out of perhaps 100) that were truly educators.

Teachers should not have the right to strike. They perform an important function in our society which is essential for its smooth running. So if they do strike, they will hinder the students progress towards gaining an education. By this, I mean, that the motivation of the student to stay in school decreases and a majority of them drop out. Therefore besides harming themselves, they harm the students.

No! Unions prey on a third party (in this case the students) to satisfy their lust for money. It's a hostage in a blackmail situation.

Many of my classmates found jobs and decided not to return to school. Others attended schools outside of Toronto and didn't return...which affected friendships and work habits. It was very difficult to get back into the school routine, after having 2 months freedom. Then there was the added worry of not being accepted at university. I just don't feel that the problems of the teachers justified leaving the students for 2 months. Surely there must be a better way...Striking hurts too many innocent people.

Seeing the teachers picketing and squabbling lowered our respect, as I said before. Teachers are objects of "example" whatever people say - I know they are human too, but often our "human" ways are not the best. Last year brought a lot of unnecessary grief for a lot of people.

Through personal experience there are too many disadvantages from the students standpoint (as already discussed -- work missed, a possible rejection from university, being

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unprepared for university level (depending on subject) etc.). There are definitely other ways with which teachers can bring their propositions (even though they may be less effective) to the boards and the public.

Teachers should not have the right to strike only because by doing so they hurt so many people. I myself was not greatly affected, but several of my classmates who would have continued in school, were disillusioned or simply left behind by the strike.

The strike accomplished nothing except creating some bad feelings between various parties. Teachers strikes shouldn't be allowed because the students who aren't involved in any way in the negotiations, are the ones who lose, without a chance of winning.

The first few days of the strike seemed like a joke. After a week went by, it was no longer a joke. Teachers who call themselves dedicated professionals and who are also paid by the taxpayers should not have the right to strike. The innocent student suffers.

Only under very grave circumstances should teachers contemplate strike action, as teachers are setting an example for the thousands of students with whom they are in contact daily. Generally, I don't condone striking, as I feel it's a "cop-out" measure when communication gaps occur, and certainly no way to solve a problem.

Teachers, professors etc., have no right (and should always be deprived of one) to go on strike because they are one of the most important set of people that play a major role in the development of one's life (i.e. career, life work etc.).

No. I don't think teachers should have a right to strike because there are too many innocent people being punished for something they have not done - i.e. students. They are not hurting the union who wants them to strike but they are hurting the students.

Like policemen, teachers have a distinct responsibility to the public. They can have either a beneficial or detrimental effect upon the students they teach. So, I feel that collectively and individually they have a moral obligation to insure that their demands don't cost the students an education. Therefore, they shouldn't be able to strike.

They have an obligation to teach, unless under very extreme conditions. They have no right to destroy someone's opportunity for a better (financially) life by strike - this is possibly what could have happened to those students who quit.

Kids in this day and age really need to respect their teachers in order to learn from them. If teachers can't command this kind of respect, then kids are not going to be "as" motivated to learn. By going on strike the teachers were in effect showing their students that they were willing to risk the students losing a year. Sure, I believe teachers should be able to "voice" their opinions, and loudly too, if they want to. But not at the expense of "innocent people."

I realize the frustrations and responsibilities that teachers are faced with when attempting to do their jobs. I also realize the demoralizing attitudes and fantastic waste that is accompanied by a teacher's strike. Weighing the two the latter is much more important to the general public.

Teachers should set examples. They instruct future leaders of our industries and country. Too many students have too much to lose when they strike. Attitudes suffer, learning suffers. It's not healthy in a learning situation!

Teachers should not have the right to strike because a strike affects too many innocent people. I compare a teaching position to a police officer or a fireman. All three of these professions have a responsibility to other human beings and by giving teachers or police a right strike would mean taking a right away from the public.

No. Because I don't feel that it has any effect on learning but it entirely destroys students-teacher, student-school moral as well as relations.

Not when it affects thousands of students who are not involved. I know of many friends who had quit school during the strike. The strike has affected these people for the rest of their lives.

No, not when they affect all the students. We are the losers--but we shouldn't even have been involved for God's sake. We didn't do anything.

Teachers are the one who should set the example for the students. - I think they are right to ask for more money but to jeperdize our future is something we should not tolerate. The strike in general reduced a lot of the respect I had for my teachers. It showed me that their primary interest wasn't the students after all.

I am very definite on this question. I realize that teachers must have some form of power in order to obtain their demands - but to use the students as their hostages is very unjust. Even if they are successful in obtaining their demands their actions have a drastic effect on how the students react to and view them.

For every one teacher, 30-35 students are out of that portion of their education - It is not fair to the students. However, the teachers must have some way of getting the pay they deserve. Striking is definitely not the way if they cared at all about the students.

If they are suppose to be teaching the students that's what they should be doing. I feel they disrupted a whole year and cheated us out of a lot (school wise and extra curricular wise). There should be some other way for them to voice their opinion and try and solve matters. A strike is not a very smart way to do anything. It turned a lot of us right off and our opinions of our teachers were really lowered. I guess we felt they really didn't care about us, so why should we support them.

When they were on strike, they jepardized the future of all of the senior students. Many stayed and went on to post-secondary levels of training but many became fed up and quit school, if there hadn't been a strike they probably wouldn't have quit. Now the jobs and careers of these who quit are poor indeed.

It is really hard to give an answer to this. I can understand the teachers' point of view. However, as a students, I feel it is unfair of one group to do something which might prove disastrous to another group. A teachers' strike can adversely affect the future of students. I know about 10 students who decided to quit school instead of waiting around to see if they were going to receive their grade 13 displomas. I would say that these students made their individual decisions based on a lack of motivation and stimulation, caused by the teachers' strike.

In an industry, a striking union works on the idea that they are costing management money, a loss in profits. Only the management suffers. The school boards do not suffer, the teachers get by (as have all strikers in the past) but it is the students who get it right in the ear. It is the students, not profits, that is the main strike weapon. This is not right. Education is gaurenteed to us by law, how can a teacher strike be legal?

Teachers claim both the title of "professionals" and the right to strike. I feel they perform a very important service & by withdrawing that service threaten to seriously damage many young academic careers. The numbers of students that dropped out of school during the teachers' strike was phenomenal at my school and many of the kids were very disallussioned by the callous manner in which their interests were shunted aside.

The teachers shouldn't have the right to strike because this has a great effect on the student (obviously) and students need education. If teachers had the right to strike more and more students would have to drop out. (quite a few did) When we started in Sept. there were approx 3,13 classes 135A, 135B, 135C, each with about 30 students. When we finished 135C had 10 people, 135B had about 15, and 135C had about 15 ALSO.

Teachers should not have the right to strike because it affects the lives of many people. Regardless of what you do to make up lost time after the strike it is impossible to give the students the same quality of education. Attitudes of teachers and students change after a strike creating a tense atmosphere.

No because a teachers strike is not like a labour strike where the company and people only lose money. A lot more results from a teachers strike and affects more than just the teachers and their bank accounts.

I certainly don't feel that they should have been able to do what they did with as many students futures at stake. I was lucky to be in the position I was (85%+) but I know many of my friends dropped out & never came back & I feel this is a crime as it was all due to the strike & now they lack the completed education which they would have got if not for the strike.

Absolutely not, the students suffer, we pay the penalty.

The teachers are only thinking of themselves and not of the damage it may do to the students. If they are only teaching for the money then they shouldn't be teaching at all.

The consequences that both students and teachers face after a strike is irreperable damage. For the students, its education for the teachers its respect and reputation.

Since I have seen what a teachers strike can do, the disastrous effects it has, I can honestly say that the teachers have no right to take an important education away from a student. Since they have chosen teaching as their profession, I feel they have a first duty to the students to see that they receive the best education possible.

3) Don't Know (18%)

I have very ambiguous feelings about this question. On one hand I realize that the teachers must have some method of relieving their grievances, but at the same time, the teaching profession affects so many young people that a strike's effects may not be noticed until years later.

I feel that a teacher has a very important job in life, and that job is to educate the upcoming generation. So any time the teachers are on strike, the students are not receiving a proper education, and the consequence could be harmful. In this sense I think teachers should not be allowed to strike, but then if we said teachers cannot strike, we take away some of their bargaining power, and that of course isn't fair. So, I don't know if teachers should be allowed to strike or not.

I have not made up my mind as yet concerning the teachers' right to strike. Many factors must be weighed such as detrimental effects to students as a result of the strike vs. detrimental effects to good teachers as a result of not having a strike. (i.e. no possible increase in salary). The role of the Board and of the Ontario Government facing a strike situation must also be considered, and as of yet, I have not reached any definite conclusion.

Teachers, along with all other employees, require some recourse to correct injustices in salaries/working conditions; however, lengthy strikes are far too detrimental to the academic well-being of most students. I cannot suggest an alternative to strikes, but merely that such an alternative is required for people employed in "essential" services.

Yes -- everyone should but NO because it messes up a lot of other people.

I'm really undecided on this, since I believe that all workers should have the right to fight back. But when they misuse this right and prolong it, too many innocent people can suffer. Especially in this case, (can't speak

> for my self since I've always been able to teach my self independently) but what about all those other students who desperately need teachers aid, then a long strike like last year, can leave a horrible imprint on some. I know for a fact of some kids who get so discouraged that they quit.
>
> To answer NO is my initial reaction, because of the fact that too many innocent people are hurt when teachers do strike. If you really stop to think about it, though, why should they be deprived of a right that everyone else is entitled to? It's a difficult question to answer. You have to consider the moral responsibility teachers should have towards students, and whether or not that is more important than their legal rights. I have to admit, that I am really undecided as to whether or not they should be allowed to strike.
>
> I'm not sure. If there was some way of fighting for what they want without striking that would be great. Otherwards I don't feel a strike should take place. The teachers may benefit but believe me, the students don't.

Newspaper Coverage

Since there was a great deal of controversy around the newspaper coverage of the strike, we inquired about students' perceptions. Table 3.15 contains the findings. The largest category concerned students who "did not pay attention" to newspaper coverage - 42%. Of the others, 30% felt that it was biased in favour of the board, 6% in favour of the teachers and 22% thought that it was fair. If we exclude the 42% who did not pay attention to newspaper coverage, and recalculate the percentages the results are that 52% of those who paid attention thought the coverage was biased towards the boards, compared to 37% who saw it as fair, and 11% who felt it was biased in favour of the teachers.

Preparation for Future Strikes

The final question on strikes asked students whether there is a need to be better prepared for future strikes - 69% yes, 18% no, and 13% indicated don't know (table not shown). Again, the comments and suggestions are revealing. Among the over two-thirds of the students who said yes, most recommended the need for course outlines that would show what had to be covered. Many also mentioned that systematic tutoring and study sessions be set up. Some also said that students should be much better informed about the different positions and reasons for the strike, and the possible impact on students should be discussed. Several others stated that the need to develop independent study habits was essential. Of the close to one-third who said no or don't know, most students either said that nothing could be done, or that even if something was organized few students would be motivated to participate.

> If teachers strike I think that each and every student should be given complete study outlines. It's easy to say study. But how do you know how to study if you have no outline. Also classes should be open for use.
>
> Teach the students before, to be independent and self-sufficient.
>
> Better than average students can always get by, but the average student, has to be kept motivated, otherwise too many become discouraged and drop-out.

Table 3.15

Bias in Newspaper Coverage of the Strike

Fair and Unbiased	22%	(239)
Biased in Favour of Teachers	6%	(71)
Biased in Favour of Board	30%	(335)
Did not Pay Attention to News	42%	(461)
	100%	(1106)
No Response		66
Total		1172

The students should be informed or able to attend teachers' meetings which can help them understand both sides of a strike. Students should be given information on what work they could do during this time that can be handed into the class, which saves them from doing it later.

I feel the students should know what the teachers are striking for and why. The students should be made more aware of the situation.

Kids need to be shown how to discipline themselves in there free time and to learn to appreciate their studies more. This would help them to be more independent and think for themselves.

Explain to the students what the strike is for and highly emphasize how it will affect them. Give them a copy of this survey when it is completed.

They should provide students with some sort of outline of what would have been taken up and tell them to study on their own. They should also have tutors in the school who are familiar with subject offered in the school.

They should be given a list of assignments they should do. Reference material lists. They should be given along with dates that they would normally be covered by if there was regularly scheduled classes. Also there should be some one they can go for assistance if needed.

Perhaps the best possible thing that could be done would be to somehow inform the students, objectively, of the different aspects of the strike, i.e. teachers position, boards position, possible duration, results.

Although I strongly disapprove of the strike, I will admit that future strikes may be inevitable. I believe that each student should be given a detailed course outline at the beginning of the course with special reference to assignments and method of evaluation. Independent study would thus be facilitated.

Yes. The majority of the students seemed to have done nothing constructive during the past teachers' strike, some became disillusioned with school. Maybe volunteer organizations could encourage students during a strike to help them. The elementary schools (if their teachers aren't on strike) could also recruit secondary students to help the teachers and maybe do a little bit of teaching themselves. In a prolonged strike, students need something constructive to do.

A lot of students would benefit if informed of the effects of the last strike on students. Their teachers should explain all issues to them without revealing any private union information.

They the students need to realize that when teachers are on strike they aren't on holiday. They need to realize that they will pay the consequences of lost school time. They need to set up a system where they can somehow properly further their education with or without the help of teachers.

In theory the answer is 'Yes.' Students should be given course outlines to that they would work on their own. However, in practice most students would not do anything unless maybe it was interesting or had to be handed in afterwards.

Material for study should be outlined; references or guidance for those requiring it should be readily available. I found no personal need for aid but saw many who could not cope without guidance.

Students should set up a committee where they could get students in higher grades to teach the students in lower grades during a strike that is, if the students were concerned enough to let it happen.

Better prepared in that they should be required to do work over the specific time of the strike. I now realize that most of my friends (also myself) spend the greater part of the strike as a holiday!

In future strikes, certain students will continue to work hard at independent study, while others will enjoy the holiday. This will never change.

If teachers handed out a course outline (quite specific--day by day or week by week) then the students would know what was expected of them in order to complete their year. After two years at university I find these outlines very helpful. If you want to get ahead you can, and if you fall behind you know what you have to get caught up on.

Yes; most definitely. I feel it is the responsibility of both teachers and board to warn us or prepare us for such drastic measures. We were never really warned or clued in to the whole situation.

Students should be prepared so that if the strike is long, they will not be missing out on the material to be covered during the year. For preparation, a tutorial system should be arranged in which students of higher grades would help those in lower grades with the work. The major problem would be to find suitable tutors for grade 13 students.

The students should be better prepared in terms of worry. The board should clearly state that, in the event of a strike the students will not lose their yr as a result of the strike.

We needed a curriculum. We had no idea where our courses were going and what would be cut out. There should be detailed course outlines available to students. Then there is no excuse for sitting around.

The student should be taught that independent study is very important in school to prepare you for the outside world where it's not the teacher who's standing over you but your boss. If a student is capable of independent study, he can be given a course outline for the year and be expected to follow this through without the help of a teacher if a strike should occur.

Nothing can replace a teacher. Without the motivation that a teacher can impart, the students will do nothing except the very few self-motivated students and there are few.

Having a holiday is all fine and well, but if students could be organized into working without the teachers I'm sure the drop out rate would not have been as high.

I really don't know the only thing I can think of is a change in the high school system that encourages them to think for themselves then they wouldn't be so greatly affected by any disruptions of their school year.

IV. GENERAL ATTITUDES TOWARDS SECONDARY SCHOOL AND THIS STUDY

Attitudes toward Secondary School

We took the opportunity to ask students some general questions on what they thought about their secondary school experience. Since this was a representative sample from three different school systems (typical except for the fact that they had been involved in a strike), we thought it would be instructive to ask students to comment on some general questions. As a context to some of the open-ended comments, Table 3.16 summarizes results from three

Table [illegible].16

Student Reflections on Secondary School Experience

Schooling Characteristic	Percent in Agreement*
Students encouraged to think for themselves	62% (711)
Students-staff felt free to talk together out of class	83% (959)
High school did not meet student's educational requirement	32% (368)

No Answer or Don't Know Averages
N=60 for the three questions

*To derive percentages scales were dichotomized (i.e., strongly agree/agree and strongly disagree/disagree are each combined. Only the former are reported here.

questions. One overall finding is that approximately one-third of all students do not think that "high school met educational requirements" or that "students were encouraged to think for themselves."* One way of interpreting the findings is that two thirds are relatively satisfied. Another interpretation is that the one-third who do not feel high school met their needs is a very sizeable group, especially since it is drawn from a relatively "successful" population of students who went on to post-secondary education. In any case, the comments themselves provide specific reasons about the dissatisfaction. The main themes from highest to lowest frequency consists of:

1. More emphasis on English Grammar and other Basics
2. Better Preparation for University/College (more independent study, harder curriculum, exams)
3. Teachers (more open teacher/student relationships, evaluate and screen teachers)
4. Guidance Counselling

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*This is also confirmed in another question in which we asked, "When you began the university/college year to what extent did you feel adequately prepared for your work?" -31% said, "Not at all/A little."

1) More Emphasis on English Grammar and other Basics

Basic complaints about my high school experience are as follows:
(1) Although coherent essay writing was stressed - grammar, sentence structure and spelling were not formally taught - I think this basic English Must be taught and English should be compulsory.
(2) Creativity was not encouraged in non-Art courses. English teachers should inspire and incite students to explore their creative capacity.

The only real complaint I have is that I do not feel the English course as it is presently taught should be compulsory. I do, however, feel that if the course concentrated more on grammar and essay writing (especially technical and business) it should definitely be compulsory.

Even though I hate learning about proper essay manner, grammar, etc. Apparently the Universities demand it. Therefore, a better preparation must be made.

Students should be taught more of basics again like spelling, and grammar. As you probably see these are my weak parts and its causing problems in university.

There is a very important problem that most of the students are facing in first year at the university. Most of us do not really know how to write University level essays. In high school we are taught that essay writing is very important but we are not taught exactly how to write a university level essay. 90% of the students, in one of my classes, do not know the grammar. I think students should be taught grammar from elementary thru to high school, so we would be better prepared for university.

I would like to see less competition for high marks, and more work put into the learning process. Should have had more homework which showed us all aspects of the concepts we were learning. Should be more emphasis put on grammar less on poetry.

I feel that secondary school education is lacking in continuing to teach the basic. I feel reading should be stressed to a far greater extent. Both in quality and quantity. Elementary math is far lacking in many students at the university level as well as proper writing skills.

Much of secondary school is a waste of time, students need (myself, included) remedial English courses, yet this isn't taught. We also need to learn how to write essays and research topics. These aspects of learning may not be as exciting as many of the other subjects but they are fundamentals of all learning.

Intensify the English courses.I, along with many others are being ridiculed in University for being "illiterate." We have good ideas but also have problems in expressing our thoughts. Writing essays in grammically 'perfect' English is another problem, especially when you haven't been taught any grammar since grade IV.

I feel core subjects should be mandatory, i.e., English, math. Also physical education. I did not take phys. Ed. beyond Gr. 11, but now feel that I should have. There should be more participation encouraged in extra-curricular activities -- not just sports, but all types.

English and physical education should be compulsory throughout. Canadian History, science, mathematics should be compulsory (and French) for 2 years. More emphasis on process of learning rather than memorization of facts.

English is very poor - Grammar, Spelling, writing and reading should be more extensive instead of continually answering questions on some little senseless passage. More should be done in the former grades (9,10,11).

I think the credit system was a flop. Not because the papers say so, but because I have trouble in basics such as spelling, essay writing and I regret not having taken certain subjects. But a complete about-face back to the "three R's" is too extreme. I think some sense of freedom must remain. Creativity has to be encouraged.

Yes, there are a couple of things I would like to see changed. The first and most important is the English course. More, much more, emphasis should be placed on basic grammar and how to write an essay! I also feel more responsibility should be placed on the senior grades.

I think that the student should be taught the basic fundamentals of grammar upon entering grade nine. Since during the four or five years at high school the student gets the opportunity to write certain essays and reports and should, therefore, be able to use grammar correctly.

Core subjects such as Math, English, Canadian Politics, and Physical Education should be made mandatory to all students.

More time should be spent teaching grammar, creative writing, and essay writing (as preparation for university). There should be more independent study encouraged.

Grade 13 English was taught like Grade 9 English. It was one of the worst, most boring courses I've ever taken. It was taught by the head of the department.

2) Better Preparation for University/College

I wish there could be greater emphasis on thinking rather than memorizing and learning how to solve type problems.

I believe there is too much spoon-feeding in the later years of high school, which does not fully prepare the student to stand on his/her own two feet in post-secondary educational institutes such as universities. The teacher should be only a medium between the student and the acquiring of knowledge, in the more advanced years.

Students in Gr 13 should be allowed to be more independent in their thinking and study approaches. They must somehow become more prepared for the freedom of University.

A lot of information obtained last year was by straight regurgitation. I don't feel that the students were geared to thinking for themselves or learning how to learn or study.

Gr 13's were not given enough freedom to go as they pleased. I think Gr 13 should be somewhat more preparatory for university. Students should be encouraged much more to work, create and interpret on their own, and to come and go as they please (so'll they'll learn to discipline themselves before University). Also more guidance should be given about all aspects of university.

I, and many students I discussed it with, believe that departmental exams should return to the school systems. While they should be relaxed enough to allow some variation in the manner in which courses are taught, they should establish standards by which all Ontario students may be evaluated for university. Due to the present situation, high school marks mean very little in actual preparation for university.

I feel that Gr 13 is not as helpful in University as it could be. The courses should be more related to what we will do later on. I felt that in Gr 13 you are spoon-fed and suddenly at university you are completely on your own.

Yes, I feel independent study in the higher grades should be encouraged. I was not prepared for the shock of finding that no one at university was going to make me do anything. I also believe that it should be made more difficult to obtain high marks in Grade 13.

It should have a more difficult and intensive workload. High school students are loafers compared to even 1st year students.

I think that students should get more responsibility. But to be prepared for university I think they should drop exemptions from final exams.

Now that I am in University, I can see that Secondary Schools don't completely prepare a student for University. I guess they should give the students more essays & assignments to do on their own time.

Mandatory Exams in all subjects for all students - present system sends students to university who have never written an exam and are totally unprepared for university exams. They have not developed proper study habits.

I would like to see Grade 13 as a better preparation for university. I know of no one who was properly prepared for the work and difficulty. An upgrading of curriculum and emphasis on the importance of individual work outside the normal curriculum should be stressed.

Exams should be returned. They are necessary if one is to cope with the panic of university exams. I also believe that courses should be made more difficult. There is too big a step from high school to university.

High school did not push the students enough. It let them slip by a minimum of work and didn't prepare them for the work involved with university. I really think it is very important for a student's timetable to be set to a certain extent as young students are not very thoughtful and tend to choose the easiest way out and regret it later, when they don't have the basics.

Grade 13 was run much too militantly DOES NOT PREPARE ONE FOR UNIVERSITY. Students should be more responsible for their own work etc. You are not hand lead in University and you shouldn't be in Grade 13 either.

In secondary schools, the students are spoon fed until they reach grade 13 or university or college. The kids are told what to do and what not to do, but once they are out of that system, they find themselves all alone. Whatever they do is of their initiative. It could be a mind blower. The system should teach kids to be independent in early grades.

3) Teachers

I wish the teachers would treat students as if they were equal as people instead of always trying to be supreme and never admit to being wrong.

I would like to see a more friendly attitude on the part of the teachers and students. It would probably solve many social problems and also give better education.

To try and motivate the teachers to participate and encourage healthier student-teacher relationships because whether teachers continue to ignore the fact or not; students do and will appreciate it.

Many teachers have an impersonal attitude towards the student. Rather than concentrating on achieving a friendlier, more personal atmosphere in the classroom, teachers seem more involved in just attaining an atmosphere of authority.

Notreally too much change. Just more student teacher interaction so that they can communicate effectively.

I wish that the principal's would take a little bit more interest in what pupils think of specific teachers. Sometimes students have legitimate grievances against teachers and these grievances are never really heard.

Teachers should occasionally undergo evaluation. Let students know what it would be like in university, college and the working world. Extend the classroom to the outside world. Teaching techniques should be used to benefit students.

Most of my high school experience was a good one. I had excellent guidance from concerned counsellors and good teachers. I have noticed however, a decline in the number of really good, perceptive, intuitive, concerned teachers. This is the main area that can withstand change.

Teachers should be screened and supervised much better. Some teachers are absolutely terrible, yet with all the complaints they are still on staff.

Some teachers were really dedicated, nice, and good yet fired because they weren't there very long. Yet some teachers were mean, poor, conceited and paid well because they were there awhile. I wish the school would give the students a say in who is a good, deserving teacher because they are the only ones who could know.

The administration should have been chosen more carefully as well as the teachers. Some are very incompetent. Too many of the above mentioned are also prejudiced especially towards those who are average or under achievers. Their first concern is to constantly praise the overachievers thus making others feel inferior.

The only complaint that I have is that the board should be more careful in choosing their teachers. I've had quite a few who were simply unqualified to teach what they were suppose to.

Some method of checking up on teachers to see that they are fit to teach. Because there are at this moment many who shouldn't be there.

It would be greatly beneficial to future students if more care was taken in picking teachers. Evaluations of each teacher should be done throughout the year to make sure he/she is doing his job.

4) Guidance Counselling

Guidance Councellors - when I attended school were not fully aware not equiped with information concerning post-secondary education. I do not feel I was prepared academically nor informed in deciding post secondary career preparation at all at my high school. I suggest better councelling, up to date post secondary information in high school and more teacher concern.

I know that it would be difficult to accomplish, but I think guidance counselling should be more widespread and accessible. In our school you had to make an appointment (took at least 1 week) and with this method you only reach the people who are motivated to seek advice, and not those who are too shy or afraid to talk to figures of authority.

Improved guidance departments that could tell us more than what to write for calendars.

The only complaint I have is about the guidance dept. Even in other schools I found most members didn't care and they tried to put you where they wanted you not where you wanted to go.

-guidance officers can really mess someone up - they say if you don't like math - drop it - disregarding the fact that you will probably need it to get to where you want to go. They're not well enough informed, they don't get students interested in finding out what doors are open - Students have to ask specific questions. - the way the system stands you virtually have to decide your future occupation by Gr 9 (really 8) because they drop things from courses.

I was in a new high school so it was almost an experiment. There were all kinds of interesting courses which I took

> that were no good to me what so ever. I feel that guidance teachers should be more forceful. I know I had potential but I was lazy so I took the easy way out and guidance allowed me to take whatever I wanted to a certain extent. Now I have little background in anything.

Attitudes Toward this Study

Over 90% of the attitudes expressed about the study were positive, although some students within this group questioned whether the results would be used to change things. In their positive comments students particularly appreciated being asked to state their views for the first time, and thought that the questionnaire would produce valuable information from a variety of viewpoints. A few students (less than 1%) said that the study was a waste of money.

> This questionnaire is indeed a good idea as it attacks the problem of strike from the "student's view-point." (It is about time too.)
>
> This is a very interesting questionnaire, covering many areas which I never really thought about. I would be very interested in knowing its results and hope that it will help in your study. I'm glad that at least some people are looking at the strike and examining its effects, instead of letting it just pass by as if nothing happened. Give it to the teachers, and let them see the way we feel this time.
>
> I hope you will use the results from these questionnaires to ban future teachers' strikes. I am sorry to be so negative about the teachers, but they elicit that response in their actions and attitudes.
>
> This questionnaire should be used to assess the damage done to students during the strike. The teachers should realize, that the strike is an ultimate weapon which shouldn't really be used until all other means have been exhausted.
>
> I think that the question of whether teachers were willing to supervise extracurricular activities after the strike should have been asked. I feel that extracurricular activities are an important factor in a youth's development socially.
>
> Some of the questions are repeated. It is difficult to

remember back to 1975 when the strike occurred. This questionnaire will most likely be examined by a committee, who will turn it over to another committee, who will in turn, turn it over to another committee. In other words "too many chiefs, and not enough Indians."

I am glad that you are trying to learn from history to judge and prepare yourself for the future. But I am sorry to have enough intelligence to be able to tell how much good this questionnaire will do (little good to none).

I was pleased that someone actually cared enough to design a questionnaire to find out how the students felt about the strike. Thank you for letting me express my opinions.

I think this questionnaire is a good idea since the true effect from a students' viewpoint can be established. Perhaps if the board and the teachers federation had known of the effects, matters would have been expedited more quickly. Really quickness in resolving strikes is all important.

This questionnaire enabled me for the first time to express my views in writing on the strike. In the months of Gr 13 after the strike, the very word was not allowed.

Questionnaire is very good and involves the important effects. Also I am glad someone is interested in my opinion.

It was a surprise to receive this questionnaire. This is the first time I, as a student, have been asked about the effects of the strike on me. Teachers, administration and parents were asked but this is the first time my view was wanted. Thanks.

I think that this type of questionnaire is the only way to get the true feelings of the students. For one thing the newspapers are full of "Bull."

Thank you for the opportunity to make my feelings known. It was an excellent questionnaire and seems to be covered everything without a bias.

I hope you accomplish what you want to here! You should because this is an interesting and well set up questionnaire that aroused some feelings that I had almost buried in essays and textbooks.

I hope that the results of this questionnaire will be issued to teachers. Perhaps then they will realize the extent to which students were affected, and may be prompted to take alternative action if such a situation ever arises again.

Will this questionnaire be shelfed like numerous other reports?

(1) Maybe this is an devias question, but are you sending an analogous questionnaire to the teachers too? (2) Also, a very careful track of the subsequent performance of the "strike" students from all grades and teachers should be kept. An important part of (1) is what kind of impact the strike had on teachers attitudes to themselves, their profession and their importance and significance in society, as related to subsequent performance. I expect there must be bitterness.

I'd like to congratulate you for coming up with this idea because I think that the teacher's strike was a very important issue which affected everyone involved (i.e. teachers, students and administrators) and that relatively little attention was paid to the entire thing once the strike was over. I'd like to see the results once you have compiled all of the statistics, Thank-you.

I feel that the teacher strike was probably the worst thing that could of happened to the teacher student relationship as far back as I remember. I also hope that the teachers are made aware of this fact.

The questionnaire, I feel, will give a great insight to the whole mess.

I think this questionnaire is super since it's allowing students like me to finally let out our steam to people who will actually read this and try to understand and reach better solutions. HOPEFULLY!!

I'm glad to see that someone finally got around to asking us what we thought about the strike. Bravo.

The questionnaire was very useful as it made think of views of which I didn't consider. There needs to be something drastically, changed in the educational system.

I happen to be fairly bitter about the strike on the whole as I am just an average student and need all the educational attention one would "normally" get, I think a lot of students got very turned off of the entire educational system because of the whole deal and I think that that is a bad thing to happen. I feel this questionnaire is a very good idea but I do not understand fully where it will get anyone. Getting peoples views is fine but will it help any in the way of further strikes etc?

I would like to thank the people conducting this study for finally asking the students their attitudes towards the strike. I remember at the time of the strike that there enough "big wheels" running around saying they knew what effect it would have on the students and how we felt about it but it bothered me that no one really listened to the student body itself. I thank you for listening.

I think this questionnaire is a good idea, because it will point out the detrimental effect the strike had on many students. Because I know many people who were affected far worse than I was. I hope the results of this questionnaire are shown to the teachers so they can see the actual effect "their" strike had on the students.

I was glad to see the questionnaire, and hope that the input from students will help to guage their attitudes towards the teachers. No matter who, if anyone, was "right" or "wrong" on the issues involved, it falls to us to continue and not to be caught in a morass of emotions from the past. Teachers, and their role in those crucial high school years have never been more important, I feel, than in the highly complex age which we now are in. Idealistic as it may sound, I feel that clearing the air and continuing to improve the quality of their relations with students and society in general is of prime importance.

It's good to see that somebody cares enough to make up a questionnaire that will reflect students' thoughts about the teachers' strikes.

It would be interesting to know how the individual teachers felt about the strike. I'm sure they were also somewhat sorry about the strike.

I think this questionnaire was a good forum to express my opinion about this unfortunate incident - I wish I could see the results of the survey - I commend your persistence in making me return this questionnaire.

The teachers' strike was a nightmare for all concerned and efforts by parents, leaders, the board and the government should be made to avoid such incidents in the future. A questionnaire such as this will, I hope, be of some help in trying to avoid such incidents. No one should have to experience a teachers' strike.

I believe this questionnaire to be a very good idea. It deals with an important issue for future educators as well as discovering the effects of the strike.

I feel this a worthwhile study and the results should be published as well as presented to Boards of Education and teachers, no matter what they are (the results). I wish best of luck with it and thank you for letting me express some of my feelings concerning the strike.

Excellent questionnaire!! I think it is a subject well worth studying! As far as the teachers go, I have very little respect for them & I think their primary concerns are their personal benefits with quality education receiving a very low priority.

This is a terrific questionnaire! I hope you will post your results in the near future!

I think this questionnaire is a good idea as it will be of great help in understanding how we as students were indeed affected. I also think that the timing of the study is proper as we are now able to view the situation in retrospect.

I'm really glad you people took the time to do this little thing. Everyone else seems to have forgotten the whole bloody issue. Are you going to do anything with it, or is it just "a questionnaire"? Either way I'm happy that I've had the opportunity to express my views on something that I felt very strongly about.

I hope you will publish some of the students' views of the strike and make the public aware of our views.

I feel the questionnaire covered most of the aspects of the teacher's strike. It was unbiased and allowed for honest answers.

I think this questionnaire is a good idea, for everyone (teachers, students & board) to find out how everybody really felt. I hope in this study (or research) that the teachers also have a chance to fill out a questionnaire.

I think that even though its too late to help the graduating students of last yr. I think that this survey is an excellent example of concern and will hopefully help the students in future situations. I would be very interested in finding out the results of this survey.

The questionnaire is good and should reflect the true feelings of the average student.

I'm sorry I'm so late with this questionnaire. Thanks for your patience. I think the results of these questionnaires should be interesting and I hope it will help teachers to use a little foresight in their actions.

I think with this questionnaire, many different points of view will be put out in the open.

I think it's about time someone asked us students how we felt. We were the ones with the most to lose and yet we rarely come into the picture. Thanks!

I think this questionnaire is terrific. It will be the first time in my life as a student that someone has asked for my opinion. Students sit through classes, do the teacher's assignments, write the exams, yet no one ever asks them about school. They're the only ones who can say. People forget that we are on the receiving end of the system. The school system is supposed to be for our benefit after all.

This questionnaire should have been sent out maybe a little sooner. It was hard for me to remember a few details that were questioned. However, I am very interested that someone is doing this study as I'm sure there were far-reaching consequences of the strike.

I feel this questionnaire is a good thing and for the first time it has also given me a chance to think and analyze the strike. I hope it does solve or help something and I wish you good luck!

You have no idea how happy I was to receive this questionnaire. I've wanted to discuss this issue with someone for a long time. I hope it accomplishes something.

I hope these questionnaires are not just tabulating and summarized into a report which will be shelved away to collect dust. I hope the results are used to formulate a plan.

This questionnaire cannot change what has happened but I think it is a good idea because it is probably one of the first times we as students have been allowed to express our views about something that affected us so much.

May I compliment you all on your questionnaire. The idea and motivation of your group is excellent.

I'm glad this questionnaire was put out. It has given me a chance to voice my opinion about the sad and sickening mess our education system is in. The teachers strike only proved this point more. I HOPE SOMEONE TAKES THESE COMMENTS SERIOUSLY.

This questionnaire was very well devised. It covered many areas which were important in viewing the teachers strike.

I think this questionnaire is worthwhile because it is the first time anyone took interest in what the student has to say.

This is a good questionnaire on paper; - I'd be more convinced when I see its effect on a (possible)? future teachers' strike!

I feel this questionnaire is a good idea. It enables you to understand how the students feel. I hope it will help if the situation of a strike ever arises again. I do, although the questionnaire should have been given out before, during or shortly after the strike instead of this late afterwards.

I feel this questionnaire is a good idea because I don't feel the students point of views on the strike have ever been considered so closely as you have with these questions. I would greatly appreciate it if you could send me the result of this survey. Thank you.

I'm glad someone finally wants to know what the students think. We got hit hardest after all the screaming was over.

I think the number of students who left school because of the strike and aren't going to return to school should be covered. I think that would answer the question whether teachers have a right to strike.

I feel this is a good idea and questionnaires should be sent to students after they have completed or graduated from a high school because then they often will give constructive view points and are not apt to be prejudiced.

While the questionnaire is I feel relevant, please, pretty please, tell me who will listen, and if they have the balls to do something about the pathetic education.

I am glad that you have taken the time to arrange this questionnaire. Perhaps now, many will be made aware of the harm that was caused and the respect that was lost by teachers.

The idea of having this questionnaire is a terrific one. It's nice to know someone has taken interest in us "the students," the ones that are affected the most. I would like to have the results of this survey, and know how other students were affected.

> I am familiar with research questionnaires and [illegible] aware of the hassles encountered. You were very polite in explaining your purpose and in asking for the student's cooperation. I hope you have a good response.
>
> This questionnaire is very relevant, I would be interested in obtaining the results of the survey. This type of attitude study should be conducted every one or two years, to provide meaningful feedback regarding the perceived condition of the educational system.
>
> I was glad to see this questionnaire. It's about time someone started to recognize the student's feelings and what effects the strike had on them.

SUMMARY

This has been a lengthy chapter containing a great deal of information. We included a good sampling of student comments because they provide more meaningful descriptions of the impact of the strike in some respects than do statistical tables. In Chapter 6 we discuss the implications of the findings. At this time we would like to summarize the main results which we think are contained in the data presented in this chapter.

I Events and Perceptions During the Strike

1) Almost half of the students in the sample reported that they didn't do any school related activities on a regular basis during the strike period.
2) A minority (33%) of those who did report activities said that they were "moderately helpful" or helpful "to a great extent." This means that only 19% of the total sample carried out school related activities which they found to be helpful.
3) In their own words, students said that the things they learned or experienced most during the strike concerned perceptions of teachers (lack of respect), boredom and a sense of waste, learning to be more independent and knowledge about what it is like to be or try to be in the work force.
4) About one-quarter of the sample worked over 18 hours a week at a job during the strike. 45% did little or not work (less than 6 hours) at a job.

5) About half the students missed being away from school either because they were worried about the impact of the loss of instruction, or because they missed the social contact at school. Only 18% said that they were glad to be away from school mainly because they didn't like school to begin with, or because they enjoyed working and making money.

II Consequences for Learning

6) Almost three quarters of the sample (74%) stated that teachers removed material from the curriculum when they returned from the strike.

7) A content analysis of the open ended comments on whether students thought the removal had any detrimental effects revealed that 55% of those who commented stated that the removal had no detrimental effect either because supplemental or non-core material was removed, or because their current post-secondary program did not require grade 13 material. Over a third (37%) claimed that there were adverse effects on marks especially in math/calculus, chemistry, and English and that they had to work harder at University or College to keep up with other students.

8) Very few (11%) said that they had actually undertaken any remedial work during their current post-secondary year.

9) Almost one-third (31%) of the sample said that they did not feel adequately prepared for their University or College year. Some said that it was due to the fact that high school does not prepare students for the transition to University/College regardless of the strike, while others commented that they felt it was related to missed instruction because of the strike.

10) Most students (61%) said that they made an extra effort in the classroom after the strike in order to make up for lost time. The same percentage indicated that teachers also made an extra effort.

11) Just after the strike, a high proportion of students (approximately 50%) were worried about graduating and about admission to a post-secondary institution. By May of the strike year the proportion of students who were worried about admission had decreased (based on the retrospective reports) to 35%, and those worried about graduating had decreased to 24%. Over one third of the students (40% just after the strike, and 33% in May) were worried about "keeping up" at post-secondary school. In short, the psychological anxiety associated with the strike affected from about one-third to one half of the students depending on the time of year. These concerns are confirmed in open ended comments by students.

12) On the direct question of whether the strike had "affected the motivation or ability" of the respondent - 79% said "no" and 21% said "yes." Open ended comments revealed that students who claimed a negative effect said one or more of the following: that the strike caused a lowered desire to proceed in school, lowered motivation to do well, lazy study habits, loss of respect for teachers and the educational system, and lowered grades. Those who reported no effect said that they were independent enough and motivated enough that a strike would not and did not affect them. Some of the students who said "no" stated that the strike did negatively affect some of their friends who dropped out of school, while others said that those who dropped out or claimed a negative effect were using the strike as a scapegoat for what would have happened anyway. Many students who indicated effects on themselves or on other students said that the strike had its greatest impact on "average" students who depended on or needed the help of teachers, and that it did not affect above average students. The study by Watson (1978) will provide more objective and direct information on this whole topic of dropout rates and reasons given.

III Consequences for Attitudes to Teachers and Strikes

13) Students stated that they had more positive attitudes toward teachers before the strike than afterwards. For example, before the strike 64% viewed teachers as "concerned" rather than "indifferent," after the strike (again retrospectively based) it had decreased to 46% and at the time of filling out the questionnaire (one and two years after the strike) it was at 50%. On these and other questions regarding whether teachers were "deserving vs. greedy" or "reasonable vs. complaining" it appears from the data that 10-15% of the students lowered their opinion of the teachers as a result of the strike.

14) Some students did feel that teachers were more helpful (27%) and others (17%) thought they were less helpful after the strike (56% thought they were the same). The reverse was true regarding friendliness (10% more friendly, 18% less friendly, 72% same).

15) The open ended comments confirmed in detail that many students (approximately 15-20%) lost respect for teachers because they thought teachers were only concerned about themselves, about money, and had used the students as "pawns." Many said that they learned that teachers are not concerned about the welfare of students.

16) Respondents stated that the majority of parents (61%) were not supportive of teachers or the strike because they objected to teachers jeopardizing their children's education for what they saw as self-interested reasons. Only 12% of the parents were said to be supportive of the teachers. Similarly, more friends than not were reported as not supportive of teachers (40% opposed, 20% supportive and the rest neutral or don't know).

17) 57% of the students said that they did not think that teachers were justified in striking in this particular

incident, and 45% said that teachers as a group should not have the right to strike (while 37% said Yes, and 19% said Don't Know). The main reason that students did not favour the strike or the right to strike was that too many innocent students are the victims and that teachers as with other essential services should not strike. Those who supported the right to strike said that all groups in a democratic society should have the right to strike. The majority of students who said Yes stated that the strike should only be used as a last resort.

18) 52% of the students who read newspapers regularly thought that the media was biased against the teachers, 37% said that it was fair and 11% said it was biased in favour of teachers.

19) 69% of the sample said that there is a need to be better prepared for future strikes. The four main suggestions made by students were (i) course outlines should be given in advance, (ii) tutor sessions should be available, (iii) ability to study independently should be taught in high schools, and (iv) there should be meetings with students so that they could be informed about the reasons for the strike, including both sides of the dispute, and that the possible impact or lack of impact could be discussed and plans made accordingly.

IV General Attitudes

In light of the large scale representative sample we had selected, we took the opportunity to ask a few questions about the students' views on their secondary school experience.

20) Approximately one third of the sample did not think that high school "met educational requirements" or "encouraged students to think for themselves." We consider this to be remarkable because it represents a sizeable minority, and is based on a sample of relatively "successful students" who went on to post-secondary schools.

21) A content analysis of open ended comments regarding suggested changes in the high school program showed four main themes, (i) more emphasis on English grammar and basics, (ii) better preparation for the transition to university/college, (iii) evaluation of teachers by students and more open teacher/student relationships, and (iv) better guidance counselling.

22) Over 90% of the students who commented expressed positive attitudes about the study and the questionnaire. They particularly appreciated that students, for the first time, were being asked for their views on the strike. They felt that they were the ones most directly affected by the strike, but were never considered as a legitimate group. Students also felt that the questionnaire would produce valuable information from a variety of viewpoints which could be helpful for future strikes, although some suggested that the results might end up as just another committee report.

In Chapter 4 we analyze the data in this chapter according to different subgroups in order to ascertain if there are significant differences.

CHAPTER 4 SURVEY FINDINGS: SUBGROUP ANALYSIS

In the previous chapter we described the overall results from the survey data. In this chapter we analyze the same information in more detail in order to determine if there are major differences among respondents in the following six subgroups:

I Location of Strike (Metro Toronto/Thunder Bay/Central Algoma)
II Type of Institution Now Attending (University/Ryerson/Community College)
III Sex
IV Parents' Occupation
V Grade Average (High School Year)
VI Reported Impact on Ability and Motivation

As before, the analysis is based on the four main aspects of the strike - activities during the strike, consequences for learning, consequences for attitudes to teachers and toward strikes, and general attitudes, although it can be said about the latter that there were very few subgroup differences to report.

An analysis of the first four factors will enable us to investigate whether certain major contextual or demographic factors are related to different experiences with or perceptions of teacher strikes. An examination of the fourth and fifth factors (grade average and impact on ability and motivation) will enable us to consider which factors are correlated with differential academic performance. As such, we may be able to understand the characteristics of those who did not perform as well as other students, although the causal relationships to the strike will remain an open question.

I LOCATION OF STRIKE

It might be expected that the strike experiences of students would vary considerably depending on the location. Board/teacher relations could vary, size of city or urban/rural location could make an important difference. Length of strike could be another obvious factor. As described in Chapter One we included three different strike locations to allow us to examine some of these differences. For example, Thunder Bay and Metro Toronto are in quite different geographical settings with different sized city populations. Although both strikes occurred at the same time of year, and lasted approximately the same length of time, one strike occurred two years before we collected data and the other strike occurred one year prior to data collection. Thus, we can look at students' perceptions one year and two years after the strikes. Central Algoma consists largely of a rural setting and the strike only involved the one high school in the system. With only three locations we will not be able to draw any absolute conclusions about situational differences, but we can find out if there are major differences which point to issues which should be pursued in other investigations.

Before examining the data we should remind the reader of our discussion on page 17 in which we said that percentage differences of less than 10% across subgroups are treated as insignificant or inconclusive, although we do report differences between 5% and 10%. When we say that there is no difference between subgroups we mean that the percentage difference across subgouprs is less than 5%. Measures of association are reported for all tables (see also Appendix D).

During the Strike

The information in Table 4.1 shows that there are very few differences across locations on the question of whether school related activities were carried out during the strike. In all three groups from 40-45% carried out no school related activities on a regular basis. A minor difference was that Metro Toronto students apparently were involved in more school related assignments (31%) compared to Thunder Bay students (21%), and more independent study (40% compared to 33%).

There was no difference between Metro Toronto and Thunder

Table 4.1

School Related Activities on a Regular Basis During the Strike by Location

	No Activities	School Assignments	Independent Study
Metro Toronto	*41% (339)	31% (261)	40% (337)
Thunder Bay	50% (135)	21% (58)	33% (94)
Central Algoma	42% (8)	30% (6)	35% (7)
Average	44% (482)	28% (325)	38% (438)

*Percentages do not add to 100 because students could be involved in both School Assignments and Independent Study. Cramer's V = .073 for the table dichotomizing, No Activities/ (Some) Activities. Chi Square on the same table is significant at .05 level.

Bay students as to whether students worked at a job during the strike nor would we expect a difference, since the strikes were of equal length. In the shorter strike (Central Algoma) it is also not unexpected that students worked fewer hours per week. For example, 45% of the Metro Toronto students, 44% of the Thunder Bay students, and 65% of the Central Algoma students worked 0-6 hours per week. At the other extreme (over 18 hours per week) the percentages were 26%, 28%, and 10% respectively. In short, in longer strikes some students are more likely to take on jobs or work more hours at existing ones.

Thirdly, on the question of whether students felt they learned anything new during the strike that they would not ordinarily have learned in school there were virtually no differences across the three subgroups (table not shown). As reported in Chapter Three, 40% of the total sample said "Yes" and this did not vary among the three site locations. Similarly, there was not any difference among the three sites according to whether students missed being away from school (44% of the overall total indicated Yes).

Consequences of the Strike for Learning

The five aspects of consequences of the strike on learning activities were: reduction of material, making up for lime lost, concerns about graduation (admission/keeping up at post-secondary level), impact on motivation and ability, and grade average.

First, there were no differences among the three sites regarding the reduction of course material - about 74% of students in each of the three locations claimed that there was removal of material. Concerning "effort to make up for lost time," again there were no differences between Metro Toronto, Thunder Bay and Central Algoma in terms of respondent or teacher effort (see Table 3.5 for the previously reported overall results).

On the questions of concerns about graduation/admission/ keeping up we can take as our reference point "just after the strike." We found no difference across the three sites. Similarly, reported impact of the strike on ability and/or motivation shows no substantial difference among the three strike locations - 21% from Metro Toronto, 20% from Thunder Bay and 26% from Central Algoma claim that the strike had an impact on their own ability or motivation.

We also examined self reported grade average for the high school year, and at mid-term in the post-secondary year. It is interesting to note that there was very little difference among the three locations for the high school year, but there was one major difference at the post-secondary year. For example, the proportion of students reporting grades over 80 at the end of the high school year were 24% Metro Toronto, 24% Thunder Bay and 20% Central Algoma, that is, there was virtually no difference (Cramer's V=.07). At mid-term post-secondary year, 14% of the Metro Toronto students reported grades over 80, while 33% of the Thunder Bay students and 17% of the Central Algoma students reported that their grades were over 80 (Cramer's V=.170). Thus, reported grade averages for Thunder Bay students had increased quite markedly compared to the other two groups. However, this difference is almost entirely accounted for by the fact that a higher proportion of Thunder Bay students went to Community Colleges where the reported grades were much higher than in the University degree programs. Thus, the reported grade average differences probably are not related to strike experiences in the three different locations. This interpretation is confirmed by the data presented in the previous paragraph.

Consequences Concerning Attitudes to Teachers and Strikes

In Chapter Three, we presented detailed information on five aspects of perceptions of teachers "before the strike," "just after the strike," and "now" (at the time of data gathering). Since the patterns are similar, it will suffice to analyze one of the five dimensions. We shall report on the first one asked namely, whether teachers were "concerned and caring" or "indifferent and uncaring." We also compared responses on two other questions which compared teachers' helpfulness and friendliness before and after the strike. On all of these questions involving perceptions of teachers there was only one difference larger than 5% and that difference was only in the 8-9% range. A slightly higher percentage of students from Central Algoma reported more helpfulness and friendliness, and more concerned teachers, but the difference from the other two groups was only in the range of 8-9% which is not meaningful with such a small sample from that location.

Another set of information on the topic of teacher relationships consists of respondents' perceptions of the attitudes held by their parents. Here we did find one important difference. More students from Metro Toronto state that their parents were opposed to teachers compared to students in the other two locations - 56%, 44% and 4[illegible]% in Metro Toronto, Thunder Bay and Central Algoma respectively, were opposed or strongly opposed to the teachers (Table 4.2).

We asked four direct questions about the strike itself - were teachers justified to strike; should they have the right to strike; was newspaper coverage biased; and should students be better prepared for future strikes. It is clear that there are no real differences across the three locations on the attitude toward strikes per se. For example, 57%, 60% and 61% of the students from Metro Toronto, Thunder Bay and Central Algoma stated that teachers were "not at all/little" justified in striking. There was, however, one major difference concerning the perception of newspaper coverage - a higher percentage of Metro Toronto students - 60% - thought that the coverage was biased in favor of the Board compared to 31% of the Thunder Bay students, and 14% of Central Algoma students (Table 4.5).

In summary, we found only two cases in which there were substantial differences among students from the three strike areas. One concerned the finding that parents in Metro Toronto were reported as being more opposed to teachers. The other finding was that more students from Metro Toronto thought that newspaper coverage of the strike was biased in favour of the board, and against the teachers.

II TYPE OF INSTITUTION (UNIVERSITY/RYERSON/DEGREE/NON-DEGREE/COMMUNITY COLLEGE)

Students in our sample either attended University, Ryerson degree, Ryerson non-degree or Community College. To avoid confusion we use the term degree level to refer to both University and Ryerson degree students who are taking University degrees. When we refer to University students we mean the University group excluding Ryerson degree students. We should also note that the total number of Ryerson non-degree students is small (N=33). Findings for this group should be interpreted cautiously. Students in Community College and Ryerson non-degree programs reported doing less school

Table 4.2

Parent Opposition to Teachers After the Strike by Location

	*Parents Opposed
Metro Toronto	56% (461)
Thunder Bay	44% (119)
Central Algoma	47% (9)
Average	53% (589)

Cramer's V = .093. Chi Square Sig. = .04.

*As in Chapter Three, strongly opposed and opposed are combined.

Table 4.3

Newspaper Coverage by Location (for those who paid attention to Newspapers)

	Biased in Favour of Board	In Favour of Teachers	Fair
Metro Toronto	60% (283)	9% (43)	31% (144)
Thunder Bay	31% (48)	16% (24)	53% (81)
Central Algoma	14% (2)	14% (2)	71% (10)
Average	52% (333)	11% (69)	37% (235)

No Response = 535 who "did not pay attention to the newspaper's position" or didn't answer.

Cramer's V = .191. Chi Square Sig. = .00.

related work than students in degree programs (i.e. those at University and at Ryerson [Degree]). Table 4.4 shows the results - 55% of the Community College students and 52% of the Ryerson non-degree students reported that they didn't do any regular school related activities during the strike, while only 38% of the University students, and 43% of the Ryerson degree students indicated that they didn't do any school related work. Apparently students who intended to proceed to degree programs or at least ended up in degree programs did more school related work during the strike.

There were only small differences in relation to whether students worked at a job during the strike. Among those working over 18 hours per week, Community College students (30%) and Ryerson degree students (34%) were more likely to work than University (23%) and Ryerson non-degree students (21%).

There also is only one relatively moderate difference on the question of whether anything new was learned during the strike that otherwise would not have been learned in school. More University students (46%) said Yes than students in the other three groups (an average of 37%).

Table 4.4

Percent Not Doing School Related Work on a Regular Basis During the Strike by Type of Post-Secondary Institution

	% Not doing School Work
University	38% (232)
Community College	55% (171)
Ryerson (Degree)	43% (54)
Ryerson (Non-Degree)	52% (16)
	44% (473)

No response 91

Cramer's V = .158. Chi Square Sig. = .00.

Consequences of the Strike for Learning

It is also interesting to find that degree students were more likely to perceive that there was removal of material. Eighty percent of the University students and 74% of the Ryerson degree students indicated that there was removal compared to 63% of the Community College students, and 52% of the Ryerson non-degree (Table 4.5). Probably the degree students were more aware and more concerned about the removal of material.

On the question of "making up for lost time" the only difference was that Ryerson non-degree students reported carrying out less of an effort than students in the other three groups - 47% reported a high effort in the Ryerson non-degree group compared to 61% on the average for the other three groups. Ryerson non-degree students were also less worried about graduating just after the strike (39% compared to an average of 49% for the other three groups) and less worried about keeping up at post-secondary school (22% compared to an average of 40%). It may be that these students were less concerned academically than other students because they were planning to enter a non-degree program. However, these students also report a greater impact of the strike on their ability and motivation - 36% answered Yes to the question compared to an average of 20% for the other three groups. In other analyses we also found that a higher proportion of Ryerson non-degree students did not complete their high school year (18% compared to an average of 5%). Thus, the Ryerson non-degree group consists of students who did very little school related work during the strike and reported a greater impact of the strike. It is an open question whether these students were not motivated in the first place or whether the strike had a greater impact on them. In either case, it should be remembered that they form a very small portion of the total sample (about 3%, N=33).

Consequences Concerning Attitudes to Teachers and Strikes

On all the questions about perceptions of teachers, i.e. whether they were concerned and caring, helpful, friendly, etc., there were virtually no subgroup differences according to the type of institution now being attended. Nor were there any differences in terms of parent opposition or support for teachers.

Similarly, there are no differences in attitudes toward the justifiability and the right to strike among the groups of

Table 4.5

Removal or Reduction of Course Material by Post-Secondary Institution (Percent Saying Yes)

University	80% (499)
Community College	63% (201)
Ryerson Degree	74% (95)
Ryerson Non-Degree	52% (17)
Average	74% (812)
Don't Know	11% (130)
No Response	29

Cramer's V = .160   Chi Square Sig. = .00

post-secondary students except for the Ryerson non-degree students, 68% of whom said that teachers were not justified compared to an average of 57% (Cramer's V = .048). Only 18% said that teachers should have the right to strike, compared to an average of 37% (Cramer's V = .098).

Finally, concerning perception of newspaper coverage the four subgroups differed only slightly with degree students being 6-9% more likely than students in the other two groups to say that there was bias in favor of the Boards (Cramer's V = .100).

In summary, there are only two substantial differences in the comparisons of students who are enrolled in the four types of programs. One is that degree students did more school related work, and were more likely to perceive that course material was removed. The other main finding is that Ryerson non-degree students did less school work during the strike, made less of an effort to make up for lost time, and report that the strike affected them more. Apparently, many of these students used the strike as an excuse for poor performance, or the strike lowered their motivation to do school work and caused them to give up. Whatever the situation it is a very small group in total.

RESPONDENT'S SEX

During the Strike

Female students said that they did more school work during the strike than did males - 61% of the females did school related work compared to 51% of the males (Table 4.6). Similarly, 35% of the females did school assignments compared to 20% of the males (Phi Coefficient .166)* And 42% did independent study compared to 33% of the males (Phi = .102). Males were more likely than females to work over 18 hours per week at a job during the strike - 34% of the males and 20% of the females worked over 18 hours. (Gamma = .175).

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*This was based on a two by two table for which Phi is the appropriate measure (see Appendix D).

Table 4.6

School Related Work During the Strike by Sex

	Doing School Related Work During Strike	
	Females	**Males**
No	39% (227)	50% (258)
Yes	61% (359)	51% (263)
	100% (586)	100% (521)

No response 65

Phi = .108   Chi Square Sig. = .00

Table 4.7

Extra Effort Inside the Classroom to Make Up for Time Lost, by Respondent's Sex

	Females	**Males**
Not at All/Little	34% (194)	46% (242)
Moderate/Very Much	66% (382)	54% (286)
	100% (576)	100% (528)

No response 68

Gamma = -.208   Chi Square Sig. = .00

Comparisons were also made on two other questions (i) whether the students felt that they learned anything during the strike that they would otherwise not have learned and (ii) whether they missed school. A slightly higher proportion of males (45%) than females (39%) said that they learned new things but this difference is too small to be significant (Phi=.06), especially since students referred to a variety of learning outcomes including knowledge about working conditions, about teachers and about their own sense of responsibility (see Chapter 3). On the second item, more females (48%) than males (39%) missed the school during the strike, but again the relationship is not very strong.

Consequences for Learning

There were no differences between the sexes concerning perceptions of whether material was removed. There were, however, some important differences on the questions of extra effort made, and whether they were concerned and worried about graduation, admission and keeping up. Over two thirds of the girls (66%) claimed that they made extra effort inside the classroom compared to just over one half of the boys (54% (Table 4.7). Similarly, 54% of the girls said that they made an extra effort outside the classroom compared to 39% of the boys (table not shown, Gamma = -.258).

Girls were also more worried about graduating, being admitted to a post-secondary institution, and about keeping up at the post-secondary level. For example, "just after the strike" 54% of the girls were moderately or very worried about graduating compared to 41% of the boys (table not shown; Gamma = -.237). However, by May of the strike year the differences between the two sexes had dropped from 13% to 5% or less. Girls were more worried at the time of the strike but not by the end of the school year.

The final item in this subsection relates to whether the strike had an impact on ability or motivation. We find that males (23%) report a slightly greater impact than females (18%) (Table 4.8).

The difference, therefore, is not very large, except to note that the number of males who did feel that the strike had an impact was slightly higher.

Consequences Concerning Attitudes to Teachers and Strikes

The perceptions of teachers did not vary between sexes. There were virtually no differences between females and males on the perception of teachers in terms of "concerned and caring," "helpfulness," "friendliness," "extra effort in the classroom," "attitudes of parents," and of "friends."

There are also no differences regarding attitudes toward the strike and newspaper coverage. The only difference in this whole area was that 75% of the female respondents said that students should be better prepared for future strikes compared to 62% of the males (Table 4.9).

It is difficult to identify the causal connections in the pattern of findings reported in this section. The picture that seems to emerge is that females were more concerned about how the strike would affect them, and therefore worked at school work more during the strike, made more of an effort in class to make up for the possible loss, and possibly as a consequence,report less of an impact. It should be stressed, however, that these inferences are based on differences in the range of 10-15% (and 5% in the case of reported impact). Stated another way, there were differences on how some females (10-15%) reacted to the strike compared to males, but the majority of females and males reacted in a similar manner.

IV PARENTS OCCUPATION

In Chapter 2, we described how the occupational scale was constructed. We have six occupational levels which range from unskilled labourers to professionals (see Table 2.5 for a summary). This scale was constructed both for father's occupation, and for mother's occupation (for the 47% of the mothers who were working).

Table 4.8

Strike's Effect on Ability and Motivation by Respondent's Sex

	Females	Males
Yes	18% (108)	23% (122)
No	82% (479)	77% (411)
	100% (588)	100% (533)

No response 52

Phi = .055 Chi Square Sig. = .07

Table 4.9

Preparation for Future Strikes by Respondent's Sex

Need to be Better Prepared	Females	Males
Yes	75% (447)	62% (332)
No	14% (82)	23% (122)
Don't Know	11% (65)	15% (80)
	100% (594)	100% (534)

No response 44

Phi = .140 Chi Square Sig. = .00

During the Strike

There are no differences in relation to whether students did school related work during the strike in terms of either fathers' or mothers' occupational groups. On the question of whether students worked at a job during the strike there was only one finding which stood out. Students from the highest occupational group (level 6) were less likely to have worked at a job. This is true for father's occupation and for mother's occupation. For example, 64% of the students at level 6 father's occupation worked 0-6 hours compared to an average of 45% for the other five levels. There were no large differences among the other five levels.

There is a small but steady increase by occupational level in the percentage who reported that they learned something new during the strike which they otherwise would not have learned. Students at occupational level 1 are slightly higher than levels 2 and 3, but essentially the higher the occupational level the more likely students were to say "yes" they did learn new things. For example, regarding father's occupation 39% at level 1 said Yes compared to 51% at level 6 (Gamma = -.142). The pattern is similar for mother's occupation where 35% at level 1 and 50% at level 6 indicated Yes. There were no differences across occupational levels on the question of whether students missed being away from school.

Consequences for Learning

There were no consistent differences across occupational levels regarding perceptions of removal of curriculum material, or of efforts at making up for lost time.

There is not much difference among parents' occupational level on the question of worry about graduation except for the fact that respondents with parents at the highest occupational level (i.e. level 6) are less worried than students whose parents' occupational levels are from 1-5 - 37% of level 6 students were worried "just after the strike" compared to an average of 47% for the other five levels. Among levels 1-5 there was a trend of people being less worried at the higher occupational levels, but the differences were small (Table 4.10). Again, on the question of impact of the strike on ability and motivation, level 6 students (father's occupation) reported less of an impact - 11% said Yes compared to levels 1-5 which averaged about 20% who said yes, although there was no difference at level 6 concerning mother's occupation.

Table 4.10

Percent Moderately/Very Worried (Just After the Strike) about Graduating by Father's and Mother's Occupational Level

	Father's Occupation	Mother's Occupation
Level 1	54% (67)	59% (62)
2	50% (93)	49% (52)
3	50% (87)	40% (37)
4	44% (53)	51% (107)
5	45% (121)	35% (27)
6	37% (31)	38% (6)
	No response N = 210	N = 558 (includes Mothers' not working)
	Gamma = -.095	Gamma - -.091
	Chi Square Sig. = .20	Chi Square Sig. = .00

Consequences Concerning Attitudes Toward Teachers and Strikes

Students whose parents were at different occupational levels did not differ in their perceptions of teachers as being "concerned and caring," "making an extra effort," or being "helpful," and "friendly."

When we examine reports of parents' opposition to the strike we find an inconsistent pattern, although there is evidence that the higher the father's occupational level the more likely the opposition (Table 4.11). Specifically, students whose parents are at level 1 (mostly general labourers) report that their parents are less opposed to teachers on strike (38% opposed) than others, and parents who are at level 5 (middle and lower management) are reported to be very strongly opposed (73%). We can only speculate on the meaning of these findings, but it seems reasonable to suggest that parents who are general labourers are less likely to oppose teachers because they themselves believe in the right to strike, while parents in middle management positions (level 5) in business are opposed to strikes (much more so than professionals [level 6]). However, the large number of non-respondents (N=316) and the difficulty of classifying occupations in homogeneous groups (compounded by student reports of parents' occupations) should caution us against any firm conclusions. This pattern, support from the lowest occupational level and opposition from middle/lower management, with similar percentages across other categories including the highest, level 6, is worth pursuing in other studies.

The pattern is similar for the respondents' own attitudes about the right to strike (Table 4.12) - 40% of students whose parents are at level 1 are opposed to the right to strike compared to 68% of those whose parents are at level 5. Again level 6 (55%) is lower than level 5.

On the final two questions in this sub-section - perceptions of newspaper coverage, and being prepared for future strikes, there were no differences in relation to the different occupational level for either father or mother.

Table 4.11

Percentage of Parents Opposed to Teachers by Father's Occupational Level

Father's Occupational Level	Parents Opposed
1	38% (41)
2	57% (88)
3	59% (94)
4	52% (56)
5	73% (185)
6	57% (43)

No response (includes = 316
don't know

Gamma = .178

Chi Square Sig. = .00

Table 4.12

Attitudes toward the Teachers' Right to Strike by Father's Occupation

Father's Occupational Level	Teachers Should Not have the Right to Strike (Respondent views)
1	40% (42)
2	52% (75)
3	46% (67)
4	58% (59)
5	68% (148)
6	55% (40)

No response = 388

Gamma = .206

Chi Square Sig. = .00

To summarize the role of occupation in the study as a whole, it can be said that there is some tendency for students at the higher occupational levels, especially level 6, to be more confident in the face of a strike. They are more likely to report that they learned something new during the strike. Students at level 6 were less worried about the consequences and they report less of an impact. There is also a definite relationship between occupational level and opposition to the strike with those in level 1 being much less opposed to teachers' strikes, and those in level 5 being particularly opposed to teachers and their right to strike. We speculated that level 1 students came from families where strikes were more likely to be seen as legitimate and level 5 students were more likely to come from families where strikes were not seen as acceptable.

V GRADE AVERAGE IN HIGH SCHOOL YEAR

We asked students for self reports about the grade average they had obtained in the final year of high school. It is interesting to compare how grade average related to the different factors, although the causal relationships are ambiguous.

During the Strike

The pattern by grade average of whether students did school related work during the strike is intriguing (Table 4.13). There are no large differences, but the students who ended up with higher grades (over 80) did more regular work. Students who worked least were those in the 60-69 grade range - the group which might be thought of as 'the average' students. It is impossible to identify the causal pattern, but either students who were doing better in the first place worked harder during the strike, or students who worked during the strike do better. However, the differences are not large between students in the 50-59, 70-79, and 80-84 range.

Those who ended up with lower grades are more likely to have worked more than 18 hours per week (Table 4.14). Either, students with lower grades worked more because they were less interested in further schooling in the first place or those who became involved

Table 4.13

School Related Work During the Strike by Grade Average in High School Year

Grade Average	Did School Related Work
50-59	59% (23)
60-69	48% (175)
70-79	57% (249)
80-84	64% (98)
85+	69% (79)

No response 59

Gamma = .204 Chi Square Sig. = .00

Table 4.14

Percentage Working Over 18 Hours Per Week at a Job During the Strike by Grade Average

Grade Average	Over 18 hrs. Per Week
50-59	40% (16)
60-69	30% (113)
70-79	20% (116)
80-84	19% (30)
85+	20% (23)

No response 43

Gamma = -.160 Chi Square Sig. = .00

in heavy work weeks tended to spend less time on school work, and consequently do less well.

There is a very slight tendency for students with higher grades to have reported that they learned new things during the strike but the difference is insignificant in the range of 5% (Gamma .067).

Students who 'missed the school' during the strike tended to have higher grades at the end of the year (table not shown). For example, 33% of students with a grade average of 50-59 missed the school, compared to 44% for those students with grade averages over 80. This seems to indicate that some students with lower grades were not that concerned or motivated about school during the strike (i.e. they were less likely to miss the school), but the differences are too small to be significant (Cramer's V = .058).

Consequences for Learning

There were no consistent relationships between grade average and whether material was removed. We do see a moderate inverse relationship between 'effort in the classroom to make up for lost time' and grade average (Table 4.15). Only 54% of those with lower grades (below 70) made an effort compared to about 65% of those with 70 and above. Students with lower grades also say that teachers made less of an effort. Those in lower grades indicate that teachers made less of an effort than those in higher grades. Thus, at the 50-59 grade average level 48% of the students state that teachers made no or a little effort, compared to 43%, 39%, 34% and 29% of those at 60-69, 70-79, 80-84, and over 85 levels respectively (Gamma = .119, table not shown).

Not surprisingly, those who ended up with lower grade averages were more worried 'just after the strike' about graduating, admission, etc. Thus, 65% of the students who ended up with 50-59 were worried about graduating just after the strike compared to 55% of those whose grade average was 60-69, 50% for those at 70-79 and 33% for those who had over 80 in grades (Gamma = .225,

Table 4.15

Effort in the Classroom to Make Up for Lost Time by Grade Average

Grade Average	Effort (Moderate/Very)
50-59	54% (22)
60-69	54% (199)
70-79	63% (279)
80-84	64% (96)
85+	68% (76)

No response 61

Gamma = .134

Chi Square Sig. = .00) The same pattern holds regarding admission and keeping up at post-secondary school.

As might be expected those with lower grades state that there was more of an impact on their ability and motivation (Table 4.16). For example, 39% of those at the lowest grade level say that there was an impact compared to only 12-14% at the higher grade levels (above 80). Again the causal connection is open to question. On the one hand, it is plausible that students who were doing poorly in the first place may have blamed the strike for poor performance. On the other hand, it is equally possible that the strike had the greatest impact on students who were borderline, and the least impact on students who were performing well. Support for both interpretations is found in the written comments in Chapter 3 with more students indicating support for the second interpretation namely, that the strike had the greatest impact on the borderline students.

Table 4.16

Grade Average in High School Year by
Impact on Ability and Motivation

Grade Average	Yes, Impact
50-59	39% (16)
60-69	23% (87)
70-79	21% (94)
80-84	14% (21)
85+	12% (14)

No response 46

Gamma = .225 Chi Square Sig. = .00

Consequences Regarding Attitudes Toward Teachers and Teacher Strikes

Students with lower grade averages in the high school year do not perceive their teachers any differently than students who had achieved higher grade averages. In the various questions of whether teachers were viewed as 'concerned and caring,' 'helpful,' 'friendly,' 'making an effort to make up for time lost' the percentage differences across the grade groups are minimal (Gamma's are in the range of .001 to .059). The only difference in terms of perception toward teachers is the one we reported in the previous subsection that those with lower grades perceived their teachers as making less of an effort in the classroom to make up for lost time. The relationship between grade average and reports of whether parents and friends were supportive was non-existent (nor would we expect these factors to be significantly related).

There were also no significant relationships between grade average and attitudes toward the strike. The relationship to whether teachers were justified was low (Gamma = .051) as were the questions of whether teachers should have the right to strike (Gamma = .006) and whether students should be better prepared for future strikes (Gamma = .038).

Consequences for General Attitudes

Up to this point we have not reported any data on the relationship between general attitudes about secondary school (Appendix A, questions 38-40) and subgroup factors because there were no significant relationships worth reporting. It is interesting to note, however, that there is a relationship between grade average and whether the respondent felt that "students and teachers felt free to talk with each other outside of class" (Table 4.17). For example, at the lowest grade level 77% of the students agreed with the statement, while at the highest grade level 93% agreed (Gamma = .162). There is also a relationship between grade average and whether students felt that high school met their requirements with those at the higher grade levels reporting greater satisfaction, but the relationship is not particularly strong (Gamma = .124, Table not shown).

Table 4.17

Student/Teacher Communication by Grade Average

Grade Average	*Percent Who Said Students and Teachers Felt Free to Talk Outside Class
50-59	77% (33)
60-69	81% (302)
70-79	86% (381)
80-84	86% (129)
85+	93% (104)

No response = 51

Gamma = .162

Chi Square Sig. = .00

*Combines Strongly agree and agree

Summary

To summarize the main findings concerning grade average in the high school year we found:

(1) Students with grades over 80 were more likely to do school work during the strike than students with lower grades. Students in the 60-69 grade range were least likely of all groups to do school work.

(2) Those who reported lower grades are more likely to have worked at a job more than 18 hours per week, than those who reported higher grades.

(3) Students with lower grades report that they made less of an effort in the classroom to make up for time lost than students with higher grades, and that teachers made less of an effort.

(4) Students with lower grades at the end of the school year indicated that they had been more worried about graduating, being admitted to post-secondary school, and about keeping up at university.

(5) Students with lower grades also report that there the strike had had more of an impact on their ability and motivation.

(6) Students with lower grades did not perceive their teachers any differently than other students, (except on the question of effort - 3 above) nor do they differ in their attitudes toward the justifiability and the right to strike.

(7) For the first time, there was a relationship to general attitudes toward the secondary school experience. Students with lower grades stated that teacher student communication at their high schools was not as open, and that high school did not meet their educational requirements.

In general, those with lower grades seem to be students who were not as close to the school or their teachers, were not as commited to doing school work either during the strike or after it, were more worried about their performance (but apparently did little about it), were less satisfied with their high school experience, and made more of an explicit connection between the strike and negative impact on themselves. There are at least two different theories that could account for the above pattern. One theory is that students who ended up with lower grades were poorly motivated in the first place and didn't apply themselves to school work. In short, they were doing poorly anyway, and would have ended up that way regardless of a strike. Under this interpretation, our study gave students an opportunity to express negative feelings which existed prior to the strike and which were not a result of it. The second theory is that average or borderline students were most affected by the strike, did less school work during the strike because they depended on teachers or needed teachers to guide or push them, made less of an effort after the strike because they were hopelessly behind, and ended up with poorer grades, and a feeling that the strike was partially to blame. While neither of these theories can be 'proven' with our data, student comments in Chapter 3 indicate that both patterns exist. It should also be made clear that our findings are based on relationships of moderate strength. We are not suggesting that all students in a given category (e.g. those with low grades) react in an identical way (e.g. say the strike has affected them).

VI IMPACT ON ABILITY AND MOTIVATION

During the Strike

We examined the relationship between perceived impact on ability and motivation and several other factors mentioned in this chapter in order to obtain a profile of the characteristics of those who claim that they were most affected by the strike. The results are revealing, if not conclusive.

An equal percentage of Grade 12 and Grade 13 students indicated that the strike affected them (Phi = .023). We also analyzed impact in relation to subject area or program concentration. As can be seen in Table 4.18 those in Maths and Sciences at the University level, and particularly those in Technology based courses at Community Colleges indicate that they were most affected.

Table 4.18

Perceived Impact on Ability or Motivation by Post-Secondary Subject Area in Program Concentration

University	Percent Saying Yes
Philosophy/Soc. Sciences	16% (19)
Humanities	14% (12)
Maths/Sciences	24% (33)
Professional course (nursing, engineering)	18% (40)

Cramer's V = .096 Chi Square Sig. = .26

CAATS/Ryerson	Percent Saying Yes
Business	23% (41)
Arts	19% (20)
Community/Health Services	17% (13)
Technology	32% (34)

Cramer's V = .142 Chi Square Sig. = .05

No response = 124

Students in business courses at the CAATS were also relatively high at 23%. These findings that students in the basic skills and hard sciences are relatively more affected by the strike, are consistent with student comments reported in Chapter 3.

The school related work patterns did not vary during the strike. Those who worked regularly at school activities or did not work at all during the strike reported equal impact. Nor were there differences in terms of doing school assignments and independent study.

Relationship to Learning

Students who said that material was removed from courses were not significantly more likely to report impact - 22% said there was an impact compared to 18% who did not think material was removed (Phi = .035).

Students who made more of an effort to make up for time lost did not report any differential impact of the strike (Gamma = -.017. There was a small relationship between perceived teacher effort and impact. Among those who perceived none or little effort, 24% indicated that the strike affected them, compared to 18% who perceived that teachers put in a moderate or very much of an effort (Gamma = .162).

It is not surprising to find that those who were most worried about graduating, admission, and keeping up at post-secondary school reported a greater impact of the strike. For example, 24% of those who were moderately or very worried 'just after the strike,' indicated that the strike had a negative impact compared to 17% who were not at all or only a little worried (Gamma = -189). The relationship is much stronger concerning admission and keeping up. Of those not at all, or a little worried about keeping up with post-secondary work, only 13% report that the strike affected them compared to 32% of those who were moderately or very worried about keeping up (Gamma = -.408).

There is also a relationship between whether students completed their year, and whether they felt that the strike had a negative impact (Table 4.19). One third of those who did not complete their year state that there was an impact compared to 20% of those

Table 4.19

Students Who Completed Their High School Year
by Perceived Impact on Ability and Motivation

Completed Year	Those Reporting Impact	Total Number
YES	20% (214)	1073
NO	33% (18)	55
		1128
	No response	44
	Total	1172

Phi = .069 Chi Square Sig. = .03

who did complete their year, although it should be pointed out that the number who did not complete their year is quite small (about 5% of the total sample - N = 55). It should also be recalled from the previous subsection that grades and impact were inversely related. Those doing remedial work at the post-secondary level, indicate that the strike had more of an impact than those who didn't do remedial work (33% compared to 19%) (Phi = .109).

Relationship with Attitude towards Teachers and to the Strike

Students who reported more of an impact of the strike perceived their teachers in more negative terms. Thus, 'just after the strike,' 15% of those who saw their teachers as 'concerned and caring' stated that the strike affected them compared to 29% who saw teachers as 'indifferent and uncaring' (Gamma = -.248). Similar relationships are found regarding teacher helpfulness and friendliness after the strike compared with before (tables not shown).

Students who felt that they were more affected by the strike also had a more negative view of the justifiability and the right to strike. Thus, 26% of those who felt teachers should not have the right to strike report a negative impact compared to 14% of those who felt that they should have such a right (Phi = .153). There was only a small relationship, but in the predictable direction that respondents who thought that students should be better prepared for future strikes had also reported more of an impact (22% compared to 16% who saw no need or possibility for better preparation - Phi = .067).

Relationship to General Attitudes

Finally, it is again interesting to observe that students who stated that there was less free teacher/student communication at the high school level reported more of an impact of the strike as did students who did not think that the high school met their educational requirements (Table 4.20).

Table 4.20

Perceived Impact on Ability and Motivation by Student/Teacher Communication/by Whether High School Met Educational Requirements

A. Students/Teachers Felt Free to Talk	Percent Reporting Impact
*Agree	18% (167)
**Disagree	32% (54)

No response = 76

Gamma = .232

Chi Square Sig. = .00

*Combines strongly agree and agree

**Combines strongly disagree and disagree

B. High School Met Requirements	Percent Reporting Impact
*Agree	15% (105)
**Disagree	31% (109)

No response = 103

Gamma = .362

Chi Square Sig. = .00

Summary

In summary, it is clear that students in math, science and technology courses felt that the strike had affected their ability to keep up in post-secondary education more than did students in other subject areas. Students who failed to complete their high school year also tended to feel that the strike had more impact on them. Those who felt the strike's impact most held more negative perceptions of teachers and did not think they were justified in striking. Similarly, they were more likely to see communication between teachers and students as lacking openness and high school as not meeting their requirements.

Once again, as with grade performance, the data do not support an inference about causality and different causal interpretations are possible. It is an open question whether the students who claimed that the strike did have an impact were more alienated from the school to begin with and would have stayed that way regardless of the strike, or whether the strike caused this alienation. Our interpretation is that the strike probably aggravated an already tenuous or strained relationship that some students had with the school. We will return to this and other interpretations of the findings in Chapter 6.

CHAPTER 5 INTERVIEW DATA

As we indicated in Chapter 2, we selected a sample of 134 students (about .06% of the total) independent of the survey sample in order to probe in more detail the issues we addressed in the questionnaire. Because, however, the return rate in the main survey was high (74%) and included detailed written comments to open-ended questions, we became less reliant on the interview section of the study. Our main purpose in examining the interview data is to determine to what extent it corresponds to the survey findings. As it turns out, there are very few major differences in the pattern of findings which are summarized below in the four main categories used in Chapter 3.

I EVENTS AND PERCEPTIONS DURING THE STRIKE

Proportionately more students in the interview sample reported doing "no school-related activities" during the strike than did students in the survey sample. In the survey sample, 44% reported doing nothing, while in the interview sample, 55% reported doing nothing. This may reflect a greater degree of honesty in the interviews, or it may be that the interview sample was less representative. In either case the overall finding remains that a high proportion of students did not do any school-related activities on a regular basis during the course of the strike periods. Students in the interviews said:

> "I spent no time on school subjects, we did not have any assignments of any sort."

> "I really didn't use my time well, I wasted it. I wasn't used to working on my own and having that much time. I didn't really discipline myself -- got up late, watched a couple of shows, put on weight -- a lot of people did "

> "I did try initially. After about two weeks it dropped down to nothing."

> "My parents wanted me to do school work but there was really nothing to do. I didn't know what to study."

A minority of students stated that they did some school work regularly:

> "Yes. Our science teacher, English teacher and geography teacher gave us assignments and I worked on these at home."
>
> "Did two essays and some reading -- maybe one hour a day was devoted to school work."
>
> "Went to several tutorials done in various houses -- once a week for two hours for most subjects -- taught by university people."

When asked about whether they missed being away from school, students gave similar responses to those given in the survey sample. As before, about 20% were glad to be away, 20% didn't care, and about 55% disliked being away. The reasons given were also similar to those from the survey sample. Those who disliked being away tended to make these kind of responses:

> "You have to realize that this is a rural area (Central Algoma). School is the prime social thing so being out of school for 2 1/2 months cut down on social life. I didn't enjoy it."
>
> "It was a waste of time. I was thinking that maybe I should get a job, but then maybe I'd get the job and the strike would end. I felt upset more than anything."
>
> "At first great, then too much time on our hands. We went back to school often, but the school atmosphere was gone."
>
> "I felt rotten. I missed the kids alot. I felt uneasy because I did not know if my year was ruined or not."
>
> "Too much time. I was bored and wanted to get back."
>
> "I hated it. If I had known that I would have been off that long I would have gotten a job. I was bored."
>
> "I wasn't happy about it. I was in 13 which was the most important year. I was worried that it would affect my university marks."

Some experienced mixed reactions, and others felt positive about the time off.

> "I was glad for the time off. It was nice to sleep in, but I was beginning to worry about continuing my education. It was kind of scarey."

> "I was happy and I was just relaxing."

> "I worked full time for six weeks. Therefore, I didn't feel too bad."

> "I had a job and needed money badly. I was very pleased with the time off."

II CONSEQUENCES OF THE STRIKE FOR LEARNING

The four main types of questions we asked concerned whether the curriculum was changed, what students and teachers did to make up for lost time, whether students were worried about graduating and being prepared for post-secondary work, and whether the students reported that the strike had a direct impact on their learning and instruction.

As with the survey sample, the majority of students said that the curriculum content was reduced mainly by leaving out unimportant or non-core material. One other aspect appears more forcefully in the interview comments compared to the survey data, namely, the feeling that material was being covered in a rush.

> "Well, they skipped over quite a few things and they went at a much faster pace so you really had to keep up with them."

> "We managed to finish the course by cramming. Instead of doing a unit in two and a half weeks, we would do it in one week."

> "They cut out about 10% -- a month's work."

> "I think they might have cut material. If they didn't cut back they would cram it. That was really hard on the student, especially those who can't pick up things really fast, like me, then you get caught behind and it's bad."

> "I think they cut off some of the extra material and included the basic work."

> "They picked out the most important things and squeezed that into the remainder of the year."

> "They concentrated the curriculum. All sports where teams would play against other schools were cancelled."

> "Cut a lot a crammed a lot. Cut down on discussions, etc. Just covered the basics."

> "Nothing was thrown out, but it was rushed over."

> "Some of the teachers shortened the courses. English, for example, cut off many books. We lost 3/4 of our poetry and grammar."

> "Sections were cut in geography, math and English."

> "They squeezed more in -- a broad view, rather than a detailed look."

> "Well, I guess they just stuck to the core really -- the minimum requirement for what would be expected of us in university."

Most students (approximately 55%) stated that they, personally, and their teachers made an extra effort to make up for lost time. (This is about the same as in the survey sample, which was 61%.)

> "We had to work much harder, more steadily and more demands were put on us. One or two out of a class couldn't hack it so they quit."

> "I had to concentrate more and work longer hours because we had to cram more into a shorter time period."

> "It was enough of an adjustment just getting back to school, without having to do ten things in a week. One day, I felt I was just going to go nuts. Teachers were cracking down and just giving us so much work."

> "I think the overall mood of the class was more intent on learning. I knew I had to concentrate more because we had to finish the year, and it was my last year."

> "The teachers really went fast and you could really notice them stepping up the pace."

> "Teaching was more efficient. They were available after class."

> "More rushed, more homework, worked evenings right to the end of June."

Again, as with the survey sample, there were two large subgroups regarding the questions of whether they were worried about graduating and about keeping up with other students at the post-secondary level. About 42% were worried about graduating and admittance into post-secondary institutions (58% were not worried), and about 48% were concerned about keeping up with other students (52% were not concerned). The interview students gave similar reasons for their concerns as did the survey students.

> "I worried about graduating. I felt the strike reduced my chances of earning enough marks to pass the course. For instance, I had trouble with English and did not pass that."
>
> "Yes, I am still worried. I know a lot of kids here (at university) know a lot of things I don't."
>
> "Yes, I thought I would lose the year and that colleges wouldn't accept students."
>
> "I knew I was going to graduate unless they put everyone back. I just worried about the fact that we didn't have the knowledge that other students have."
>
> "My major concern is doing well this year, relative to those who did not experience a strike."
>
> "I worried very much -- too much. Instead of doing my homework I'd be sitting, praying that I would pass."

Many other students also said that they were not worried:

> "Everyone kept telling me to worry, but the university needed students."
>
> "Not worried because courses from high school didn't have much to do with courses taken at university."
>
> "I worried a bit before arriving at university, but not after."
>
> "They more or less reassured us that we would all graduate at the end of the year."
>
> "No. The strike didn't affect nursing subjects because no carryover of subjects. It might have affected me if I were in maths."

> "No, I wasn't worried. I knew that there were so many students, they couldn't make us all go through it again."

In summary, there were two large subgroups of students -- one group worried about graduation, admittance and keeping up at university due to the loss of several weeks of school and the curriculum missed during that period; the other group were not concerned, mainly because they felt everyone else was in the same boat or that the curriculum they missed was not that important or relevant to their post-secondary work.

We also asked the students in the interview sample directly whether they thought the strike affected their present performance -- 33% said Yes, 63% said No, and 4% didn't know. The reported impact is higher than in the survey sample in which 21% said Yes; but the reasons were essentially the same.

> "I lost in math. You never know what you might have accomplished in the two months of the strike."

> "Negatively, I couldn't get back to the routine of studying."

> "It is easy to say it did, and blame everything on the strike, but I think it did have some effect. I kind of got lazy and disorganized."

> "It affected me negatively -- in work habits, lost ability, I became lazy, lost touch with routine. I am still struggling to get back."

> "Yes, I could have done better if I had learned more in high school during the strike period in nearly every subject but mostly math, calculus and algebra. People who were not on strike covered about twice as much material as me."

Most students simply said, "No, it didn't affect me one way or the other." A few elaborated:

> "Didn't affect me because I had good working habits anyway."

> "Not at all. I don't see how three months is really all that valuable. If three months affects a student, then the student is a borderline case anyway."

The following response was typical of a small number of students (N=5) who saw positive consequences of the strike.

> "The strike gave me a lot more responsibility -- it did not damage me at all. I got used to doing things on my own. When teachers were not there, I learned to rely on myself."

III CONSEQUENCES OF THE STRIKE REGARDING ATTITUDES TOWARD TEACHERS AND STRIKES

We asked students in the interview sample questions parallel to the survey questionnaire concerning whether teachers were as helpful after the strike as before, whether the students' attitude to the teachers had changed after the strike, whether the student was supportive of the teachers, and whether their parents and friends were supportive of the teachers.

About 65% of the students said that the teachers were as helpful as before, 5% said that teachers were more helpful, 30% said that most of their teachers were not as helpful, or that some were helpful and others were not. On the question of whether their attitude toward teachers had changed, 65% also said that it had not changed, while 30% stated that it had changed for the worse. About 5% said that it changed for the better. The latter students who were supportive appreciated the position of teachers and their helpfulness under the circumstances:

> "The teachers were personal and great. If someone needed help, they gave it to us. They were concerned and helpful."

> "Even more helpful. They realized we had missed too much work and they tried to help."

> "After the strike most of them were more helpful. They gave us extra materials and things we would have missed."

> "Yeah, they were really sympathetic toward the kids, especially those going on to university. They helped them as much as possible."

> "I thought of them more as human beings than as teachers. They would talk about their problems (strike) and it made them seem more human."

The majority of students (about 65%) who said that their attitude toward teachers had not changed simply said, "it was about the same as it had always been - no change."

Those who expressed opposition (about 25-30%) stated it in these words:

> "Yeah, I think it (attitude) changed because I thought quite a bit of the teachers before, but after, I thought that the teachers were not in it for the students but for the money."
>
> "Yes, I was a little less friendly toward teachers. I thought of them as being a little bit greedy. It was a side of the teachers I did not like to see."
>
> "Yes (my attitude changed). They were teaching but they weren't giving it the time they used to. They were working just 9-3. Some of the teachers for sure were just venting their anger on the students."
>
> "My attitude changed. I didn't want it to change, but I think it did. I thought more that I'm on my own because you can't really count on teachers any more."
>
> "Less respect. It was just that they were not as high up on my scale any longer."
>
> "I hate to say it but you no longer respected them. For the work they do and the money they wanted they shouldn't have gone on strike."
>
> "I still resent the teachers. Lost respect for them."
>
> "I wasn't too thrilled with them after the strike. I had always wanted to be a high school teacher but I washed my hands of the idea after the strike."
>
> "Only to those that were bitter. Those that went on as though nothing had happened, you continued that way as well. Those that were bitter, you began to dislike."
>
> "No, they weren't helpful. I don't know whether I had a bad lot of teachers. Not all of my friends say that. The majority of my teachers were bad. History teacher came back and would talk about his views of the situation. Defensive and self-righteous."

The remaining few students were ambivalent having had different experiences with different teachers.

> "They tried to be (helpful). There were subtle things -- they weren't as enthusiastic as before. They weren't happy about what had happened, you could tell that."

> "Some were friendly, some angry. They just laid out the work and did not seem as friendly or as relaxed as at the beginning of the year."

> "Yes, I sympathize with the teachers. The fact that I knew some of them helped. It was their principles that I respected. If they believed in this and that, and that it was right and necessary for them to strike, then yes, I support them. It bothered me that they became very selfish. After the strike they seemed scared and hurt, and not as warm and friendly."

> "Helpful yes, friendly no. They tried to crack down and be teachers, but there had been a lot of loss of respect."

> "A couple of teachers were really good -- didn't dwell on what had happened -- they were more sensitive and concerned with helping us do our work and get our year. That's two out of six. Two others were really hostile; two others really didn't say anything."

One student seemed to think that the situation returned to normal after some initial adjustments:

> "I think that attitudes had not really changed. Teachers were helpful if their help was needed. When I first got back I didn't have as much respect for their authority, but toward the end it pretty well went back to normal."

On the question of whether students were supportive of the teachers during the strike, 39% said Yes, 32% said No, and 29% had mixed feelings. Many students (45%) felt that teachers should have the right to strike, while 35% said No, and 20% were not sure. Thus, the interview group is somewhat more supportive of the right to strike than the survey group, among which 37% said Yes, 45% said No, and 19% were not sure. Those that were for the right to strike felt that teachers should have the right as much as any other group in Canada, while those that were against it, tended to refer to personal costs for themselves and other students, and felt that teachers as an essential group in society should not be allowed to strike.

> "At the beginning I thought the teachers had to be right, but later when I thought I might lose a year, I changed my whole attitude. Why should I lose my year so they could make money?"
>
> "For the right things, Yes: things that have to do with teaching, e.g. discipline, English and educational standards."
>
> "At first I supported them, but not at all after they turned down their offer."
>
> "They were not justified really. They shouldn't have used the kids as a weapon."
>
> "No, I don't think so. It's too much of a burden on the student."
>
> "No, certain people shouldn't be allowed to strike -- police, fire, and hospital."
>
> "In the beginning, I supported them, but because of the length, I changed; they jeopardized students."
>
> "Parents, No. Friends, No. Everyone I know was against the strike."

Students who supported the right to strike expressed it in the following terms:

> "Everyone has the right to strike. They should have the same consideration as others."
>
> "When it first started, I supported it because our teachers were the poorest paid in Northern Ontario. Nobody would give an inch. Nobody would give the teachers anything."
>
> "Teachers should have the right to strike, but within limits, and not when they are jeopardizing students' year."

As the last respondent has stated, several students were in favor of the right to strike, but within limits. Most students who favored the right to strike thought that it should be used only as a last resort.

Finally, as with the survey group, the majority of parents (60%) were reported as being unsupportive of the teachers, while a small percentage were supportive, 18% (22% didn't know). There was slightly more support among friends, but still in the minority (43% were not supportive, 25% were supportive, and 32% didn't know). Both these sets of percentages are similar to the findings in the survey sample as reported in tables 3.11 and 3.12 as were the reasons given:

> "No (my parents didn't support the teachers). Teachers make a lot more money than people do here and the taxes are high. The people see the strike as an unnecessary drain."
>
> "My parents weren't. They were absolutely against it, especially my mother. She had to see me all day."
>
> "No way."
>
> "My parents were not supportive. My friends were much like myself, supportive at first, less so later."
>
> "A lot of parents in our district were against the teachers. They did not really know why the teachers were striking. They were only concerned that their children be in school."

Those who reported that their parents supported the teachers (18%) were not as elaborate. Most of this group simply said Yes.

IV GENERAL ATTITUDES TOWARD SECONDARY SCHOOL

When we asked students about what they thought about their high school experience and possible improvement, a minority (about 15%) said that they liked it the way it was. Most students had concerns for improvement and did not hesitate to suggest them. The most prominent themes concerned the need for improvement in grammar and other basics, better guidance systems, and more discipline:

> "Should offer more counselling services. I had to do it all myself. No one helped me figure out what I wanted to do."
>
> "I don't think high school prepared you enough for university. You are not pressured enough in high school. My last exam I wrote was in grade 9, so I don't know how to study for an exam now."

"English did not prepare me for university. I got the credit, but it didn't teach me grammar or how to write an essay."

"One thing I found about high school is that the English course was nothing but novels, plays, etc., but here (community college) they stress grammar, sentence structure, etc. In our school, no English teacher taught grammar."

"It needs changing. In college, grammar is important. I did not have any grammar in high school and this affects my performance in college."

"I think there should be upgrading of grammar and language. There should be more awareness of people than just facts and figures."

"There should be tighter control over the quality of teachers coming into the profession."

"Guidance counsellors didn't help any. I had an older brother there. He sat there with my brother's chart in front of me. He told me not to go to university or Ryerson because I would be overeducated."

"Guidance counsellors give too little too late. I didn't see a guidance counsellor until grade 12."

"Need compulsory courses and more guidance in earlier grades."

"More subjects compulsory, and put teachers through a screening process or something like that."

"They should teach more, be more strict, give more classroom work. There is too much freedom."

"It's too slack, not enough discipline, and too easy to pass. Weed out teachers who don't give a damn. A lot can't work with students."

"More stress on the three R's or basic subjects. More guidance available to students. Guidance office way in the back - sort of an unknown quantity. It took a lot of courage to go back and explore with guidance counsellors."

"In English, back to basics. My writing and grammar were bad this year. Last term we did grammar -- I learned more here than in five years of high school."

> "More Canadian Studies, especially in the early grades. Emphasis on three R's and emphasize physical fitness, I think it is neglected."

Finally, as in the survey, virtually all of the students thought that the interview questions were good, and that it was important to ask students what they thought. The only negative or reserved comment made by eight students referred to the time which had lapsed since the strike, and the need to gather information at the time of the strike. Some representative comments about the interview and the study follow:

> "Pretty reasonable questions. Sums up what people are doing."
>
> "It's a good interview. It let me cover everything. I think something should be done with the results to correct a terrible school situation."
>
> "Something like this is important. The teachers and board should think twice about the effects of the length of a strike on students. This kind of information should be considered by them."
>
> "It's a good idea to see how strikes affect kids. I don't think teachers think about how it affects kids."
>
> "It's a good interview. If you get enough students' opinions, maybe the government could do something about it. It made me think about the strike."
>
> "Why is this interview done so late after the strike? I thought this type of thing would come out right after the strike."
>
> "I think it brings up a lot of answers I wanted to give. I think this is worthwhile."
>
> "Good to have an opportunity to think about the strike. I have profited from it."
>
> "I'm glad someone is taking an interest in how the students felt. That's a terrific idea."
>
> "Students didn't have anything to say during the whole thing. No one cared about whether the students would lose out."

> "The results should be published for all to see. Everyone thought the strike would affect students, but no one ever asked."

> "Interviews like this are worthwhile. At the time of the strike students felt no one cared, so it's important to see that people do follow up the effects. Are you interviewing teachers or just students? I think it would be helpful if you involved teachers -- they were very torn between two sides -- students, and Board and government."

As the last student and several others stated, one of the findings which emerges from the study is that students appreciated the opportunity to express their opinions. It is apparent that many students do not feel that they have an opportunity to voice their concerns on important school related matters, such as the kind of program and school experience available to them, or even on such an important crisis as a strike which they think involves them as much as or even more than other groups.

CHAPTER 6 CONCLUSION

In this final chapter, we would like to accomplish three things: I, to summarize briefly the main findings of the study as a whole, and II, to discuss specific interpretations of the results, and III, to reflect upon the implications of the study.

I SUMMARY OF FINDINGS

The results have been summarized at the end of Chapter 3, and at the end of each subsection of Chapter 4, so we will not report them in detail here. Rather, our goal in this chapter is to provide an answer to the question, "What are the major perceived consequences of the teacher strikes as seen by students in our samples?" At first reading one might be impressed that the student views are quite negative. However, the tone of the comments by students was mainly one of a constructive reaction to their experiences.

Overall Findings

First, it can be said that almost half of the survey sample and over half of the interview sample did not do any school related activities on a regular basis during the strike, and only very few (19% of the total survey sample) found these activities to be helpful. About 25% of the survey sample said that they worked at a job for over 18 hours a week during the strike.

Second, a large majority of students in the survey sample (74%) and in the interview sample said that parts of course curriculum were removed or eliminated when they returned from the strike. There were two different perceptions of the consequences of this removal. One group of students stated that the removal was not harmful, because it consisted of non-core material, or the material was irrelevant to their current post-secondary program. Another group felt that the removal of material was harmful to them. Because they had missed or rushed over material they felt that their marks or knowledge base had suffered.*

*There is evidence from the responses to open ended questions in Chapter 3 and from our analysis in Chapter 4 of the characteristics of those who felt the strike had most impact on their ability and

(continued)

Third, a majority of students (55-61%) in the survey and interview samples said that they made an extra effort in school after the strike in order to make up for time lost. Many commented that a hectic pace was set in the attempt to cover all important course material.

Fourth, the analysis of whether students were worried about graduating, admission to post-secondary school and keeping up at post-secondary school, identified what seemed to be two different subgroups. The proportion of students worried 'just after the strike' was almost half the survey sample. However, by the end of the school year we found that there were the following two subgroups: (i) about one-third of the sample who continued to be worried, and (ii) the remaining two thirds who were not concerned about the impact of the strike on their subsequent performance.

Fifth, on the direct question of whether the strike had 'affected ability or motivation to obtain an education beyond the secondary school level', 21% of the survey sample and 33% of the interview sample said yes. Students who claimed a negative impact referred to one or more of the following: (i) lower grades, (ii) loss of study habits, and an increase in laziness, (iii) lower desire to obtain further education, or (iv) loss of respect for teachers. Those who indicated no impact stated that they were independent and motivated enough that a strike would not affect them. About 3% of the survey sample said that the strike experience increased their motivation by making them more self reliant. Students from both groups (those affected and those not affected by the strike) reported that many students dropped out of school as a result of the strike. However, we have no direct data on these students.

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motivation for post-secondary study that this was especially true in math/calculus, chemistry, and to a lesser extent English where comments focused on lack of training in grammar and essay writing.

Sixth, students stated that they had more positive attitudes toward teachers before the strike than afterwards. The open ended comments confirmed in the students' own words that about 15-20% of the survey sample said that the strike caused them to lose respect for teachers. These respondents thought that teachers were mainly concerned about money, had used the students as pawns and were not concerned about the welfare of students. However, the majority of students (61%) in the survey sample said that teachers made an effort in the classroom after the strike to make up for time lost. When we asked directly about whether teachers were helpful when they returned from the strike, 17% in the survey sample and 30% in the interview sample said that teachers were less helpful after the strike than before.

Seventh, the majority of respondents in both the survey and interview samples (61%) stated that their parents were opposed to teachers during the strike. Only 12% in the survey study and 18% in the interview study said that their parents supported the teachers.

Eighth, 57% of the students in the survey sample did not think the teachers were justified in striking, and 45% said that teachers as a group should not have the right to strike. In the interview study 35% of the students said that teachers should not have the right to strike. Most students recognized that the question of the right to strike was very complicated. Those who thought teachers should not have the right to strike emphasized the damage that was done to students who constituted an innocent third party to the dispute, while those who took the opposing position emphasized the importance of the right to strike for all occupational groups. Those who answered "don't know" and provided comments tended to see both sides of the problem without being able to provide a resolution.

Ninth, 52% of the students in the survey sample who read newspapers regularly thought that the media coverage was biased against the teachers. Most of these students came from the Metro Toronto area.

Tenth, 69% of the survey sample said that there is a need for students to be better prepared for future strikes by (i) being given course outlines, (ii) making tutor sessions available, (iii) having schools foster the ability to study independently, and (iv) having meetings to inform students about the issues involved in the strike.

Eleventh, about one-third of the survey sample said that high school did not meet their educational requirements, did not prepare them for post-secondary schooling, and did not encourage students to think for themselves. The majority of students in both the survey and interview samples recommended that changes be made in the high school program to emphasize English grammar, and other fundamentals to prepare students for the transition from high school to university or college, and to evaluate teachers and improve teacher student relationships. These findings probably reflect general orientations to the interface between secondary and post-secondary education.

Twelfth, over 90% of the students in both samples expressed positive attitudes about the research study, and the questions asked. They most often said that students' views on the strike were very important, but had never been asked before. They especially appreciated the opportunity to state their concerns even at this late date.

Subgroup Findings (refers to survey study)

First, we found only two cases in which there were substantial differences among students from the three strike areas, and these findings were not directly related to the impact of the strike on students. One finding was that parents of students in Metro Toronto were reported as being more opposed to teachers. The other difference was that more students from Metro Toronto thought that newspaper coverage of the strike was biased against the teachers. It is also worth noting that none of the other perceptions about what respondents did during the strike, and how the strike affected them varied across the three strike locations.

Second, there were also only two differences involving comparisons of students in the four different types of post-secondary programs - University, Ryerson degree, Ryerson non-degree and Community Colleges. Degree students (University and Ryerson degree) did more school related work during the strike than others and Ryerson non-degree students stated that they made less of an effort to make up for time lost, and were more affected by the strike. It should be remembered, however, that the total number of students in the Ryerson non-degree group is quite small (N=33).

Third, girls seem to have reacted to the strike differently than boys. A higher proportion of girls did school work during the strike, made an effort to make up for time lost, were concerned about graduating and perhaps as a consequence a lower proportion of girls perceived an impact on their ability and motivation, although the latter finding is too small to be significant.

Fourth, father's occupation, and mother's occupation were measured in terms of six levels. We did find evidence that students whose parents were at the highest occupational level (6) were less worried about the consequences of the strike, and report less of an impact. Students whose parents were at the next to highest occupational level also stated that their parents were more opposed to the teachers and to their right to strike.

Fifth, grade average at the end of the high school year was correlated with several factors. The largest amount of school work was done by students who attained the highest marks (over 80) while the least amount was done by students who attained average marks (60-69). Those with lower grades are also more likely to have worked at a job for longer hours per week during the strike. Not surprisingly, students who ended up with lower grades reported that they were more worried after the strike about graduation, admission and keeping up, and were affected by the strike to a greater degree. There was no relationship between grade average, perceptions of teachers, and attitudes toward strikes.

Sixth, students who were in courses at the post-secondary level which required basic skills - math/sciences or technology programs were more likely to say that the strike affected them. However, these students (who said they were affected by the strike) did not do any more (or less) school related work during the strike, or after the strike.

Students who said they were affected by the strike were more likely to worry about graduation, admission into a post-secondary institution and keeping up at the post-secondary level, and were more likely to not have completed their high school year. These students were also more likely to view their teachers in negative terms, to feel that they were not justified in striking, and to be against the teachers' right to strike.

Seventh, and finally, the only subgroup relationships we found with the general attitudes toward secondary school were that those with lower grade averages, and those who felt the strike affected them indicated that teacher/student relationships were not as open at the high school, and that the high school did not meet their educational requirements.

II INTERPRETATION

In order to discuss possible interpretations of the findings, it is necessary to view the study in a larger context. We do not, for example, have longitudinal or comparative data which would allow us to examine perceptions of students before and after the strike, or to compare student attitudes in strike situations with those who didn't experience strikes. We cannot compare grade 12 and 13 students who went into the work force with those who went on to post-secondary schooling. In our survey sample we did obtain a very high response rate - 74% - but we do not know the views of the 26% who did not return their questionnaires. Even if this group were somewhat different in their views it would only alter the findings by a couple of percentage points, and we have no reason to believe that they would be different. All in all, we probably have a good representative sample of grade 12 and grade 13 students who went on to post-secondary work. The fact that the survey findings were mostly replicated by the interview sample which was independently drawn, further confirms the quality of the data.

It should also be clear that our task was to gather information about the consequences of the strikes on the attitudes and perceptions of students. The starting point for this type of study is the fact that a strike has occurred. Possible causes and conditions which led up to the strike, and an analysis of the negotiation process are outside the terms of reference of the study.

Within the above parameters we are confident in drawing some conclusions based on the data. We do not have objective measures about academic performance, or study habits, but there is little doubt that about 20% of the students in grade 12 and 13 think that the strike had a negative impact on either their grades or motivation to learn. It is very probable that the strike did not affect students who were doing well academically (e.g. those with grades 80 and above), and may not have made any difference for those who were doing very poorly (e.g. those with grades in the 50's), i.e., they would have done poorly regardless of a strike, but it does seem that the strike had its greatest impact on the average and borderline students (e.g. those in the 60-69 range, and possibly lower). The exact grade ranges cannot be specified, but the pattern is probably as described. There was also indirect data, information from respondents' analyses of the behaviour of other students, which indicated that borderline and average students were more likely to drop out of school as a result of the strike, but these students (who dropped out) are not in our research sample.

One can draw upon student open ended comments to explore further the reasons for the relationships just discussed. Students who are doing well academically do not seem to depend as much on teachers and school settings, at least for short periods of time such as the duration of strikes. Presumably they are more self reliant and independent in their study habits and/or possibly have more family resources (e.g. parents who can help them) than other students. For example, students with higher grades did do more school work during the strike, and students at the occupational level (6) reported the lowest impact of the strike. Average and/or borderline students apparently need the help, direction or pressure to keep at their school work which teachers and the school environment provide. Without this support or pressure they neglect school work and eventually either give up* or become lazy and less motivated. It is impossible to decide within this study whether these students are using the strike as an excuse for poor performance or are experiencing negative effects.

We also have evidence from students which show that those in the 'hard' sciences - math/calculus, chemistry, technology and business courses - were more affected by the strike than students in other programs. Students in maths and sciences at University or Community College said that the content and skills in those subjects in grades 12 and 13 were more directly needed in their post-secondary work while students in other programs (social sciences, humanities, services) said that their post-secondary programs were less directly reliant on their high school subjects. The comments on weaknesses in students' preparation in English also focused on skills which were prerequisites for University courses - skills in grammar and essay writing.

Although most students said that individual teachers were helpful after the strike, the most consistent finding in this area concerned 15-20% of the students who said that the greatest impact of the strike was their loss of respect for teachers. Clear and consistent reasons were given for what is perhaps a general "demystification" of teachers. Students saw teachers as being primarily concerned about money and their own welfare, and not at all concerned about the welfare of students who were innocent parties to the disputes. They said that teacher/student relationships deteriorated as a result of the strike. Related to this concern, about one half of the sample did not think that teacher strikes should be allowed, and many of those who did stated that they should be used as a last resort, because too many students are inadvertently harmed. Many of the students were also ambivalent as they struggled with the pros and cons of the question. In any case, the actual strike seems to have either crystallized students' views about teacher strikes and/or served the function of politically socializing students by giving them first hand experience with strikes.

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*Objective statistics on drop out rates from the Watson (1978) study will provide further information on whether more students drop out in strike years and strike areas.

It also should come as no surprise that the majority of parents were opposed to teacher strikes. It is interesting to note that parents in Metro Toronto were more strongly opposed and that newspaper coverage of the strike in Metro Toronto was seen as more biased in favor of the Boards (and thus, against the teachers). It is impossible to choose between the causal interpretations as to whether newspapers were leading public opinion in a biased way, as teachers have claimed, or whether they were reflecting public opinion.

Another important finding was that about one-third of the sample did not think that high school met their educational requirements or adequately prepared them for future schooling. There were remarkably consistent suggestions that English grammar was inadequately taught/not taught at all at high school and that its teaching needed to be improved drastically. Students thought that there needed to be more emphasis on independent study and on exams or other methods of preparing students for the independence of post-secondary schooling, that there was a need for better guidance counselling at high school, and that high school teachers should be evaluated and teacher/student relationships improved. Students also said that these issues were not related to the strikes. Responses show that a large minority of students have a clear idea of specific improvements that should be made in high school programs. It should be remembered however that these students represent grade 12 and 13 students who continued to post-secondary schooling. Students in other grades, and students who went into the work force after grade 12 and 13 may have different views.

III IMPLICATIONS

The objective of this research has been to provide representative data from students which could inform interested parties in debating the issues. Specific policy implications should emerge from such discussions and are not the domain of this report. It is, however, possible for us to suggest some guidelines for these discussions.

It is not, we believe, possible to discount the data we have reported simply because it is based on students' attitudes and perceptions. A close analysis of both the quantitative data and the comments students made in response to open-ended questions suggest that a large number of students formed attitudes to both academic work and teachers around the strikes. Whatever the weaknesses of the causal analysis in the data - whether or not these attitudes were a consequence of pre-existing differences or the strike per se - the strike existed as the focus of a coherent and well articulated set of attitudes a year and, for one group of students, two years after the event itself.

Of particular note are the attitudes students formed towards teachers. We do not wish here to raise the question of who was "to blame" for the strike. Such a question cannot be answered from within this project, and is probably unanswerable from within any research project. Our focus is on student perceptions, and the retrospective data suggest an increase in negative attitudes towards teachers after the strike. Comments made in response to open ended questions hint at something else on which we have no direct information - the visibility of teacher demoralization in classrooms after the strike. Nor, apparently, did the catch-up efforts made by teachers after the strike and perceived by almost two-thirds of the students totally erase the changes in the students' view of teachers.

We can offer no direct evidence of the strike's long term impact on learning. A minority of students reported any long term impact, although a more extensive impact, for example on dropouts who were not included in our sample is hinted at. Attitudes and perceptions generated in the strike experience do, however, emerge forcefully and may well affect students' ideas about education and the people in it for years to come. Unfortunately, we do not have any direct data from teachers, but it may be (as indicated by student comments) that many teachers felt demoralized after the strike. The impact of the strike on teachers' attitudes toward their own jobs and on the social climate under which they work may be a very important outcome of the strike. There also may be a direct connection between the attitude, motivation and social climate experienced by teachers, and the motivation and learning outcomes of students. As a partial indicator of this relationship it is worth noting that open student/teacher communication (in terms of students feeling free to talk with teachers) was associated with higher grade average, and lower impact of the strike.

Events such as strikes often have an impetus or sociological force of their own which carry along the individual teacher, administrator or student in a flow of events where the climate and opportunity to consider possible consequences are lacking. It is our hope that the data presented in this study, when viewed in the more dispassionate light that the passage of time brings, will contribute to an understanding of the meaning of teacher strikes for students. Certainly, we have no hesitation in recommending that student views should be more directly taken into account in any future strikes.*

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*See also Fullan et al. 1977 for further discussion of the issue of involving students more directly in school matters.

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APPENDICES

APPENDIX A QUESTIONNAIRE

A STUDY OF SOME OF THE EFFECTS OF TEACHERS' STRIKES ON FORMER GRADE 12 AND 13 STUDENTS IN ONTARIO

Student Questionnaire

February, 1977

Instructions:

1. The questions have been written so that you may give your answers quickly and easily. For most items, you should circle the number that most closely reflects your own feelings about the question being asked.
2. Sometimes you will be asked to express your views in your own words. Please express them as thoughtfully and frankly as you can.
3. The number which appears on this page is for administrative purposes only. All individual answers will remain confidential.

THANK YOU VERY MUCH

Michael Fullan
Glenn Eastabrook
Ed Thompson
Laurie Bryant
Susan Light

Department of Sociology in Education
The Ontario Institute for Studies in Education
252 Bloor Street West, Toronto, Ontario

SECTION 1: GENERAL QUESTIONS

1. a) What was your last grade completed?

Grade 12	1
Grade 13	2

b) In what year did you complete that grade?

1976	1
1975	2
Other _____ (please specify)	3

2. At the time of the teachers' strike, in what borough or municipality were you attending school?

East York	1
Etobicoke	2
North York	3
Scarborough	4
Toronto	5
York	6
Thunder Bay	7
Central Algoma	8

3. a) Which post-secondary institute are you now attending?

University	1
Community College	2
Ryerson (degree program)	3
Ryerson (non-degree program)	4
Not attending a post-secondary institute	5

b) i) If you are now attending university, in what subject area are you concentrating or intending to concentrate, if you are in a general program?

Philosophy and/or social sciences	1
Humanities	2
Math and/or sciences	3
Professional course (nursing, pharmacy, engineering, etc.)	4
No specific concentration	5

3. b) ii) If you are attending a community college or Ryerson now, in what subject area are you concentrating or intending to concentrate?

Apprentice training	1
Business	2
Arts, communication and instructional resource	3
Community, health and food services	4
Technology	5

SECTION 2: EVENTS AND PERCEPTIONS DURING THE STRIKE

4. a) From the following list of school-related activities which ones, if any, did you do on a regular basis during the teachers' strike: (Please circle as many as apply)

Globe and Mail Enrichment Exercises (Toronto)	1
School assignments	2
Independent study	3
Work with a tutor	4
Transfer to another school	5
Educational T.V., (e.g. OECA Channel 19)	6
I did none of the above	7
Other (please specify on the line below)	8

____

b) In general, to what extent did you find the above school-related activities helpful?

I did not do any school-related activities	1
I found the activities not at all helpful	2
I found the activities a little helpful	3
I found the activities moderately helpful	4
I found the activities helpful to a great extent	5

5. How many hours per week did you spend working for money during the teachers' strike (exclude Christmas holidays)?

0 - 6 hours per week	1
6 - 12 hours per week	2
12 - 18 hours per week	3
18+ hours per week	4

6. In your opinion, did you learn anything during the strike which you would not ordinarily have learned about in school?

Yes	1
No	2

Please comment:

7. How did you feel about being away from your school during the strike?

I missed the school	1
I was glad to be away from the school	2
I didn't care one way or the other	3
Other________________________________	4

Please comment:

8. During the teachers' strike, how often did you have discussions with your parents or guardian regarding the strike?

every day	1
once or twice a week	2
occasionally	3
never	4

9. In general, what was your parents' or guardians' attitude regarding the teachers' strike? (Please circle one answer in each column.)

	during the strike	after the strike
strongly supportive of the teachers	1	1
supportive of the teachers	2	2
neutral	3	3
opposed to the teachers	4	4
strongly opposed to the teachers	5	5
I don't know	6	6

Please comment:

10. During the teachers' strike, how often did you have discussions with your friends regarding the strike?

every day	1
once or twice a week	2
occasionally	3
never	4

11. In general, what was your friends' attitude regarding the teachers' strike? (Please circle one answer in each column.)

	during the strike	after the strike
strongly supportive of the teachers	1	1
supportive of the teachers	2	2
neutral	3	3
opposed to the teachers	4	4
strongly opposed to the teachers	5	5
I don't know	6	6

Please comment:

SECTION 3: EVENTS AND PERCEPTIONS AFTER THE STRIKE

12. a) In general, did teachers reduce or remove material from your courses when school resumed?

Yes	1
No	2
I don't know	3

b) If you answered "Yes", about what percentages of your courses were removed from the following subjects as a result of the time loss during the teachers' strike?

English ____%

Foreign Languages ____%

Physical & Biological Sciences ____%

Social Sciences - history, geography, economics ____%

Mathematics ____%

Technical Subjects ____%

c) If there has been a reduction or removal of course material, has it had any detrimental effects on your present performance in college or university? Please comment:

13. Following the strike, to what extent did you make an effort in the classroom to make up for time lost during the strike?

Not at all	1
A little	2
Moderately	3
Very much	4

14. Following the strike, to what extent did you make an effort outside the classroom to make up for time lost during the strike?

Not at all	1
A little	2
Moderately	3
Very much	4

15. Following the strike, to what extent do you think most of the students made an effort in the classroom to make up for time lost during the strike?

Not at all	1
A little	2
Moderately	3
Very much	4

16. Following the strike, to what extent do you think most of the teachers made an effort in the classroom to make up for time lost during the strike?

Not at all	1
A little	2
Moderately	3
Very much	4

17. Do you feel that the strike has affected your ability or motivation to obtain an education beyond the secondary school level?

Yes	1
No	2

Please comment:

The next set of questions asks you to indicate the extent to which you were concerned about certain things as a result of the strike. We would like to know the extent to which you worried about these things during two different periods of time.

18. To what extent did you worry about graduating from high school? (Please circle one answer for each column.)

	Just after the strike	May (of the year of the strike)
Not at all	1	1
A little	2	2
Moderately	3	3
Very much	4	4

19. To what extent did you worry about getting admission to a university or community college or Ryerson? (Please circle one answer for each column.)

	Just after the strike	May (of the year of the strike)
Not at all	1	1
A little	2	2
Moderately	3	3
Very much	4	4

20. To what extent did you worry about keeping up in university, community college or Ryerson? (Please circle one answer for each column.)

	Just after the strike	May (of the year of the strike)
Not at all	1	1
A little	2	2
Moderately	3	3
Very much	4	4

21. a) Did you complete your high school year?

Yes	1
No	2

b) What was your average at the end of your last completed school year?

50-59	1
60-69	2
70-79	3
80-84	4
85+	5

23. When you began the university/college year, to what extent did you feel adequately prepared for your work?

Not at all	1
A little	2
Moderately	3
Very much	4

Please comment:

24. a) Have you undertaken any remedial work this year?

Yes	1
No	2

b) If you have undertaken any remedial work, in what subject areas?

c) If you have taken remedial work, was your need to do remedial work related to the teachers' strike?

Yes	1
No	2

Please comment:

25. What was your average on mid-term tests, essays and assignment this academic year?

50-59	1
60-69	2
70-79	3
80-84	4
85+	5
not possible to give a mark	6

26. Do you have any further comments you would like to make that are related to the teachers' strike?

SECTION 4: ATTITUDES TO TEACHERS

27. In your opinion, should teachers have the right to strike? (Please circle one answer and then explain your choice in the space below.)

Yes	1
No	2
I don't know	3

Please comment:

28. In your opinion, to what extent were the teachers justified in going on strike?

Not at all	1
A little	2
Moderately	3
Very Much	4

29. The newspapers covered the strike issue. How often did you read a newspaper last year?

Every day	1
Once or twice a week	2
Occasionally	3
Never	4

30. What did you think of the newspaper coverage of the strike? (Circle one answer only) It was

fair and unbiased	1
biased in favour of the teachers' position	2
biased in favour of the boards' position	3
I did not pay much attention to the newspaper's position	4

The next three questions ask you about relationships with teachers.

31. In general, how helpful were the teachers to y[illegible] as a student after the strike as compared with before the strike?

Much more helpful	1
A little more helpful	2
About the same as before	3
Less helpful	4
Much less helpful	5

32. In general, how friendly were the teachers towards you as a student after the strike as compared with before the strike?

Much more friendly	1
A little more friendly	2
About the same as before	3
Less friendly	4
Much less friendly	5

33. In general, how friendly were the teachers and parents with each other after the strike as compared with before the strike?

Much more friendly	1
A little more friendly	2
About the same as before	3
Less friendly	4
Much less friendly	5

34. Do you have any other comments regarding your own attitude to teachers or the relationships between teachers and parents?

The following three questions ask you to indicate how you viewed most of your secondary school teachers before the strike, just after the strike and now, in retrospect.

The list of adjectives below were used by the media from time to time to describe the teachers. These adjectives are scaled so that "1" represents one viewpoint and "5" represents the opposite viewpoint. 2, 3, and 4 represent in-between views with 3 being the mid-point.

For example, if you felt that most of your teachers were "very dedicated" you would answer in the following way by circling the number that corresponds to your choice:

Dedicated [✓ 1] 2 3 4 5 Undedicated

35. Before the strike, how did you view most of your teachers? (Please circle one answer for each of a, b, c, d, and e.)

a.	Concerned and caring towards students	1 2 3 4 5	Indifferent and uncaring towards students
b.	Greedy and irresponsible	1 2 3 4 5	Deserving and justified in their demands
c.	Hardworking in a difficult job	1 2 3 4 5	Lazy and spoiled by a soft job
d.	Constantly complaining	1 2 3 4 5	Reasonable
e.	Aware and independent in their actions	1 2 3 4 5	Boss-led by more militant leaders.

36. Just after the strike, how did you view most of your teachers? (Please circle one answer for each of a, b, c, d, and e.)

a.	Concerned and caring towards students	1 2 3 4 5	Indifferent and uncaring towards students
b.	Greedy and irresponsible	1 2 3 4 5	Deserving and justified in their demands
c.	Hardworking in a difficult job	1 2 3 4 5	Lazy and spoiled by a soft job
d.	Constantly complaining	1 2 3 4 5	Reasonable
e.	Aware and independent in their actions	1 2 3 4 5	Boss-led by more militant leaders

37. Now in retrospect, what is your general opinion of secondary school teachers? (Please circle one answer for each of a, b, c, d, and e.)

a.	Concerned and caring towards students	1 2 3 4 5	Indifferent and uncaring towards students
b.	Greedy and irresponsible	1 2 3 4 5	Deserving and justified in their demands
c.	Hardworking in a difficult job	1 2 3 4 5	Lazy and spoiled by a soft job
d.	Constantly complaining	1 2 3 4 5	Reasonable
e.	Aware and independent in their actions	1 2 3 4 5	Boss-led by more militant leaders

SECTION 5: SECONDARY SCHOOL EXPERIENCE

The following statements ask you to reflect back on your secondary school experience. Please indicate the extent to which you agree with these statements.

	Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know
38. My high school encouraged students to think for themselves	1	2	3	4	5
39. Students and teachers in my high school felt free to talk with each other outside of class	1	2	3	4	5
40. My high school did not meet my educational requirements	1	2	3	4	5

41. Looking back on your secondary school experience are there aspects of it which you would like to change (e.g. curriculum, methods of study in the school, the way in which the school was run, etc.)?

42. In the event of future strikes, do you think students need to be better prepared for a period like a teachers' strike?

Yes	1
No	2
I don't know	3

Please comment and make suggestions if you feel students need to be better prepared:

43. Please use the space below to write in comments about any other issues regarding the teachers' strike that you think are important and should be covered, or for comments you would like to make about this questionnaire.

SECTION 6: BACKGROUND CHARACTERISTICS

44. Please circle one:

SEX -	Female	1
	Male	2
AGE -	16	1
	17	2
	18	3
	19	4
	20	5
	21+	6

45. Is your father or guardian now working outside the home?

Yes	1
No	2

Please describe his job briefly, or his last job if not working now:

46. Is your mother or guardian now working outside the home?

Yes	1
No	2

Please describe her job briefly, or her last job if not working now:

47. What language do your parents usually speak at home? (Circle one)

English	1
French	2
Chinese	3
Greek	4
Italian	5
Polish	6
Portuguese	7
Ukranian	8
Other (please specify)	9

Thank you for your time
and co-operation.

APPENDIX B

INTERVIEW SCHEDULE FOR A STUDY OF THE EFFECTS OF TEACHERS' STRIKES ON FORMER GRADE 12 & 13 STUDENTS IN ONTARIO

What high school did you attend last year?
What post-secondary institute are you now attending?
What course are you enrolled in?

Prior to the Strike

1. (a) In October or early November, did you in any way anticipate that a teachers' strike would occur?
   (b) Was the school atmosphere any different at that time and if so, what indication of differences were there?

2. Were you surprised that a strike occurred?

3. (a) When the strike began, were you pleased about the time off?
   (b) How did you feel when you realized that the strike was going to continue for a lengthy period of time?
   (c) How did you feel about being away from school for 9 weeks?

During the Strike

4. How did you spend your time during the strike?
   (a) on school related subject
   (b) working for money
   (c) doing other educational activities
   (d) other things (watching T.V., socializing with friends, etc.)

5. At this time did you receive help from anyone with your school work? If so, from whom?
   (a) teachers
   (b) parents
   (c) community volunteers
   (d) older students
   (e) students in same grade

6. (a) Were you supportive of the teachers' position during the strike?
   (b) Did you feel the teachers were justified in striking?
   (c) In your opinion, should teachers have the right to strike?

7. (a) During this time, how often did you discuss the strike with parents and friends?
   (b) Were parents and friends supportive of the teachers' position?

8. (a) Do you read the newspapers regularly?
   (b) Did you read the newspapers regularly during the strike?
   (c) In your opinion did the press cover the strike accurately and fairly?

After the Strike

9. When you returned to school did you change your work habits?
    (a) work more or less longer hours
    (b) work more or less concentratedly in class
    (c) work more or less concentratedly outside of class
    (d) no change

10. (a) In your opinion, were teachers as helpful and friendly after the strike as before?
    (b) Did your attitude toward your teachers change in any way after the strike (as compared to before the strike)?
    (c) Did your teachers do anything to make up for time lost during the strike?
    (d) Did they change the curriculum in any way?

The Extent to which the Strike Caused You Concern

11. Did you worry about,
    (a) graduating?
    (b) getting into university/college? getting a job?
    (c) doing well in post-secondary school relative to those who did not experience a strike?

How You Are Doing Now

12. For post-secondary students
    (a) How well are you doing in your present school situation?
    (b) Do you think that the teachers/ strike has affected your present performance? (positively - e.g. increased responsibility; negatively - e.g. loss of instruction, guidance, etc.)
    (c) Have you undertaken any remedial work this year? In what subject areas? If so, was your need to do remedial work related to the teachers strike?
    (d) What was your average on mid-term tests, essays and assignments this academic year?

In Retrospect

13. (a) How do you feel about the educational system in general?
    (b) What is your present attitude toward teachers?
    (c) Can you offer any suggestions to improve the quality of education and make school a more valuable experience?

14. In the event of future strikes, do you think students need to be better prepared for a period like a teachers' strike and how?

15. Are there any other issues regarding the teachers' strike that you think are important and should be covered?
16. Do you have any comments or suggestions you would like to make about this interview?

Background Information

17. What was your average at the end of your last completed school year? Did you complete your last school year?

18. Sex M or F

    Age

19. Is your father or guardian now working outside the home? Please describe his job briefly or, his last job, if not working now?

20. Is your mother or guardian now working outside the home? Please describe her job briefly or, her last job, if not working now?

21. What language do your parents usually speak at home?

APPENDIX C

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION
252 BLOOR STREET WEST, TORONTO, ONTARIO, CANADA M5S 1V6 TELEPHONE 923-6641

February, 1977

Dear Student:

We are conducting a research study, funded by the Ontario Ministry of Education, on the possible effects of teachers' strikes on grade 12 and 13 students who are now attending a university, Ryerson or community college. We have selected a random sample of students who experienced a teachers' strike in Metro Toronto, Central Algoma and Thunder Bay.

We are primarily concerned with what you and other students think about various aspects of the strike experience. It is very important that we get a good response from students in order to understand the attitudes and perceptions of what most students feel.

We have enclosed a copy of the questionnaire with a pre-paid envelope addressed to us. It should take you about thirty minutes to complete the questionnaire. We think you will find many of the questions interesting.

If you did not attend a university or college, or if you dropped out or left for a period of time, please complete as much of the questionnaire as possible.

The number on the questionnaire is for administrative purposes only, in order to help us keep track of the number of questionnaires, and to send reminders to those who do not return the questionnaire. All questionnaires will be treated confidentially, and no individual will be identified.

If you have any questions please feel free to telephone one of us (area code - 416, 923-6641, ext 271 or 289).

If you want to find out about the results of the study, please write us, and we will make sure that you receive a summary of the main findings.

We thank you for your help, and would appreciate it, if you would fill in the questionnaire, and return it to us as soon as possible.

Sincerely,

Michael Fullan

Michael Fullan,
Chairperson

L.C. Bryant

Laurie Bryant

Ed Thompson

Ed Thompson

Researchers,
Dept. of Sociology
in Education.

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION
252 BLOOR STREET WEST, TORONTO, ONTARIO, CANADA M5S 1V6 TELEPHONE 923-6641

March 17, 1977

Dear Student:

Three weeks ago we sent you a questionnaire concerning a research study we are conducting on the possible effects of teachers' strikes on grade 12 and 13 students who are now attending a university, Ryerson or community college.

We have now received about 50% of the questionnaires from students in the sample. It is extremely important that we get a full response from students in order to understand the attitudes and perceptions of what most students feel.

As we have not yet received a completed questionnaire from you, we have enclosed a second copy of the questionnaire in case you mislaid the first one or didn't receive it for some reason. Please fill it in and return it in the enclosed pre-paid envelope as soon as possible. It should take you about thirty minutes to complete. We think you will find the questions interesting.

All questionnaires will be treated confidentially, and no individual will be identified.

Thank you for your help.

Sincerely,

Michael Fullan

Michael Fullan,
Chairperson, Department of Sociology
in Education. 923-6641 ext. 271

lb/MF

Ed Thompson

Ed Thompson,
Researcher, Department of Sociology
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THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION
252 BLOOR STREET WEST, TORONTO, ONTARIO, CANADA M5S 1V6 TELEPHONE 923-6641

April, 1977

Dear Student:

About three weeks ago we sent you a second copy of a questionnaire concerning a research study we are conducting on the effects of teachers' strikes on grade 12 and 13 students who are now attending university, Ryerson or community college.

We are sorry to bother you again, but we would like to encourage you to send in your completed questionnaire. We have received about 65% of the questionnaires with very informative and valuable information. It is very important that we obtain a full response, to increase the amount of information collected and to obtain on overall and accurate response.

We will not be sending you any more reminders (we are sure you will be happy to know), but we would appreciate it very much if you would mail the questionnaire to us sometime during the next several days.

If you have lost the questionnaire, please telephone or write to us and we will send you another one.

If you have mailed your questionnaire in the last couple of days, please accept our thanks.

Sincerely,

Michael Fullan

Michael Fullan,
Chairperson, 923-6641 ext.271(2)
Dept. of Sociology in Education.

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Ed Thompson

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APPENDIX D STATISTICAL NOTE

The statistics used in this report are relatively simple. The basic findings, which are reported in Chapter 3, consist mainly of percentages of students who held particular views or attitudes on the topic in question. In Chapter 4, we carried out subgroup analysis in which case we report the relevant statistical measures. The chi-square level of significance is reported for all tables. It shows whether the two variables in question are related by calculating the probability that the particular relationship would be found by chance. With large samples (as in our survey sample of 1172) even small differences will result in a statistically significant chi-square. Thus, in nearly all tables in Chapter 4, in which we report differences, the chi-square will be significant in the range of .00 to .05 level which indicates that the probability that the result was found by chance is five in one hundred or less.

By itself, chi-square indicates whether or not two variables are related. It does not tell us how strongly they are related. To indicate the latter we have used appropriate measures of association. When two variables are linear or ordinal, i.e., each can be ranked from lowest to highest as with our occupational level variable, or with perceptions that range from 'not at all' to 'a great extent', the appropriate measure of association is gamma which ranges from +1.00 if there is a perfect positive correlation to -1.00 if there is a perfect negative correlation. If two variables are related in a weak or non-existent way the gamma statistic will be in the range of .000 to .090. The exact figures for determining whether relationships are weak, moderate or strong are somewhat arbitrary. We interpret gamma's in the range of .100 to .150 as somewhat weak, but worth discussing. As we go above .150 the relationships become stronger and stronger. Most of the relationships in our study are in the range of .100 to .250 which can be considered as moderate. Gamma is also used when there is one ordinal variable, and one dichotomous variable (e.g., male/female).

For a table which contains two variables with two categories each (i.e., a 2 x 2 table), the appropriate measure of association is phi. For example, impact of the strike on ability and motivation (yes/no) by sex (male/female) would be such a table. The phi statistic also ranges up to +1.00. Again, most of the relationships in Chapter four as indicated by the phi coefficient are moderate (in the range of .150 to .250).

When we have larger tables with at least one non-ordinal variable (e.g., nominal variables of three categories or more such as location of strike - Metro Toronto/Thunder Bay/Central Algoma) the suitable measure is Cramer's V which is a modified version of phi. Cramer's V also ranges up to +1.00.

The three statistics (gamma, phi and Cramer's V) cannot be compared with each other literally. Their use is twofold. First, the varying strengths of relationships in a series of tables using the same statistic (e.g., gamma) can be quickly compared by observing the sizes of the statistic for each table. Second, the size of the statistic can be used roughly to indicate whether or not the relationship is weak. For example, if the coefficient is much below .100 it can be considered as weak or non-existent.

All of this notwithstanding, the best guideline for the general reader is to compare percentage differences between categories. Generally speaking, percentage differences in the range of 0 to 5% indicate that the two variables are not at all or only very weakly related (the measure of association, of course, will also show this). Percentage differences in the range of 6-10% can also be considered as weak. Differences over 10% are considered as moderate to strong depending on the size of the difference.

We have been discussing relationships between two variables. In fact, the main findings in the study (Chapter 3) concern single variables in which the percentage of students who hold a particular viewpoint is the most significant item of interest. The main thing that we should be concerned about regarding these findings is whether the sample is representative in order to allow us to generalize to the population as a whole. As we have stated, the random sample combined with a very high response rate gives us considerable confidence that the sample is indeed representative.*

---

*See also J. Davis, Elementary Survey Analysis (Prentice-Hall), 1971, and N. Nie et al Statistical Package for the Social Sciences, Second Edition, McGraw-Hill, 1970, 1975 for further discussion of the issues raised in this note.

III
The Effects of Ontario Teachers' Strikes on Students: Effects on Student Flow, Dropout and Transitions

---

CICELY WATSON and MOHINDRA GILL, Principal Investigators

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INTRODUCTION

The OISE contract study of the secondary teacher strikes in Ontario in the academic year 1975/76 was designed to answer a wide range of questions about the possible effects of the strike on the students. This limitation does not suggest that the effects on other interested parties[1] are of no importance, but it does reflect the Ministry's main concern or reaction to any widespread event in schools--"What effect will this have (has this had) on children and youth and their schooling at this time?" The study was in response to the strike of the teachers in Metropolitan Toronto, which closed the schools from November 12, 1975 to January 18, 1976. However, in designing the study it was held to be more useful to consider the wider question of strikes in general, in the context of 1975/76 strikes which not only involved the Metro school closing but also a comparison set of strikes. And a longitudinal research aspect was included in that the comparison would also cover the years before and after the strike. To some extent this design enabled us to look at the recovery of these school systems after the strike. And in any case this pre/post, three-year review was necessary for the statistical analysis; it would provide the benchmarks to assess the change in the statistical picture of the strike year.

The contract with OISE consists of three sub-studies, each dealing with a different set of the questions raised, and investigating them in a manner appropriate to the questions. There will also be a summary report presenting the main findings. This report is of the study to "determine what impact the strike had on retention and student flow" and "to consider the effects of the strike on those students entering university and other post-secondary institutions". The only "effects" on the latter group, which this portion of the contract deals with, are effects on the probability of making the transition from a secondary school to a university or a CAAT, and variations in the students' Grade 13 academic records which are the selection basis used by the receiving institutions.

---

[1] The teachers involved, other secondary school teachers in the province, and the provincial federation (OSSTF); elected school trustees; parents and the community generally; the school administrators and non-education staff; business providing services to schools and school personnel.

This is primarily a statistical study. No change occurs in a large public system without manifesting itself in the statistical records of the system. Indeed, detailed review of the annual statistics enables one to correct the myths and misconceptions which inevitably surround continuing and complex public activities. Schools and schooling are not free from such myths and misconceptions and even "having been there" is no safeguard against inaccuracy. The historians of the future may wrangle over the relative power positions of the principal players, the forces in our society which led to these power confrontations, the crucial moments or meetings which led to the prolongation of the strike and its relative impact on different groups. This study will provide some of their source materials.

There are limitations to this type of study which must be stated from the outset. "Proof" in human affairs can seldom be demonstrated with the precision commonly obtained in physical matters. It is not generally possible to show "cause" and "effect" under rigorously controlled conditions. It is possible, however, to record conditions before, during and after an event and describe the movement which occurs in the statistical record, assessing the accuracy of these observations by a number of tests. Then if a change has been observed and measured, one which coincided with the event, one can judge whether the assumption of a connection between the event and the change seems to be reasonable. The burden of proof then shifts--from establishing that there *was* any change and that it *could* have been in any way related to the event under study, to establishing that such a change occurring in such magnitude at such a time (coinciding with the event) could *not* have some relationship to the event. In other words the task becomes one of explaining a rather farfetched set of coincidences. So, in this report, we shall not speak of proving the effects of the 1975/76 strikes. We shall, however, be describing statistically certain changes which took place that year, and during the strike months, ones which were a departure from the normal behaviour of the system and which did not occur in other boards where no strike occurred.

There is a second limitation which must be explored before we report our findings--can these conclusions be generalized? Is the system reaction which is being revealed more likely to occur in *any* strike of secondary school teachers? Or, more reasonably, occur in any teacher strike in Ontario? Or are these findings unique to the strikes of 1975/76? To answer this we must look at our sample boards. Are they (collectively) a good representation of Ontario?

Although there were 11 teacher strikes in Ontario in that year, our sample includes only ten. When the design of the study was being discussed we knew of ten 1975/76 strikes. Our main interest was in the six boards of Metro but, as coincidence would have it, the other four boards had all participated in a large secondary school dropout study the year before the strike year. So their dropout data, necessary for one part of the study, had already been gathered, and would form a good comparison for the Metro boards. Two of the latter had also participated in the provincial 1974/75 dropout study, so that would reduce our data gathering. By replicating, for the strike year and the year following, the dropout study of 1974/75 we would obtain part of the comparison being sought. Therefore the ten board sample was agreed. It was not till some months later that we learned that there had been 11 strikes that year (we assumed there had been more) and by increasing the original sample by one we might have covered all that year's strike boards. The Kent County Board's secondary school teachers had been on strike in one form or another from December, 1975 to March 28, 1976 (including the winter break). Their officials were cooperative in providing records from which their dropout statistics might have been extracted, but a study of them showed that the handwork involved would be considerable. Given our budget of time, personnel and money it just could not be done. So the original sample was left unchanged. It includes the six Metro boards--City of Toronto, Borough of York, East York, North York, Scarborough and Etobicoke--and four others--Windsor, Sault Ste. Marie, Kirkland Lake and Central Algoma. For much of the analysis we deal with these ten boards *vs.* the rest of the province. Since we are also interested in the differences between the strike boards we also treat them individually, referring to them by code number. These boards vary greatly in size, geographical location and dispersion of their secondary schools, size and type of schools, detailed characteristics of their student body and any other variable one could identify. So the notable thing is not that there is variance among them. But they are, in effect, compared with themselves (in strike and out of strike) and that is the variance of prime interest here.

There is no question but that the six Metro boards are not typical of Ontario boards of education, but what of this sample of ten as a group? It was not intended to represent the province, of course. The conclusions to be drawn from the study, however, should be valid for these boards--even if they cannot be generalized to any group of Ontario boards on strike.

Sample of Strike Boards Compared with Population on Sex and Grade Level Distribution

Our first concern is with comparing our sample of strike boards with the total secondary school population in Ontario on important variables such as sex and grade level. Such student characteristics should be taken into account (or controlled) in any study of this nature. The comparison is intended to answer the following question:

> Is the study sample representative of the total secondary school student population in Ontario with respect to sex and grade level distribution?

As can be seen from Tables i-1 and i-2,[2] the study sample is significantly different from the parent population on both of these variables.

Our next question concerning the study sample is:

> Are there significant differences among the ten boards with respect to the distribution patterns of dropouts by sex, grade level and the month of withdrawal? (These three factors were found to be important in studying patterns of dropouts, according to earlier OISE studies.)

Distributions by sex, grade level and month of withdrawal are shown in Tables i-3, i-4 and i-5 respectively. As expected, the boards were found to be significantly different with regard to these distributions. In the strike year the proportion of male dropouts was higher than female (which accords with the general finding on dropouts), except in Board #02. Generally these boards had a larger than expected proportion of dropouts from Grade 11. But it should be noted that the Boards #08, #09 and #10 are overrepresented in Grades 9; and Boards #02, #03 and #07 are overrepresented in Grade 13.

Table i-5 shows the dropout loss of these boards by month in 1975/76. Provincial dropout statistics (collected by means of the principal's September 30th report) are not given by month, so the only comparison data we have are those gathered in the 1974/75 study (a survey which covered dropouts from schools representing over 42% of the secondary school population that year). That year's sample reported 20,002 dropouts for 1974/75. Our strike boards reported 19,047 for 1975/76. Comparison of the percentage distribution of the losses in the two samples, by month, is as follows:

---

[2] The tables are included at the end of each chapter.

	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	N
1974/75 dropout sample	14.0	19.1	12.6	6.0	9.8	11.7	6.5	10.0	9.1	1.2	20,024
	(33.1)								(10.3)		
1975/76 strike sample	20.0	13.2	5.3	1.0	12.4	15.8	10.7	9.3			19,047
	(33.2)								(12.3)		

Registration practices vary from school board to school board, so it is advisable to combine the Sept./Oct. figures and the May/June ones. The combined figures are given in brackets. The six Metro boards are so large, of course, that they dominate the strike sample. Only two of them participated in the 1974/75 dropout study, so its sample is a better representation of the province as a whole. In fact in that sampling, it was the county boards which were overrepresented.

We shall discuss the withdrawal losses in relation to the strike dates in the various boards elsewhere in this report. All that we wish to establish here (by reference to Table i-5) is that there was a statistically significant difference in the distribution, by month, of the dropout losses of the different strike boards and between the strike sample and the provincial picture as sampled in 1974/75.

Sources of Data

This study used a variety of statistical data obtained from different sources.

1. The statistical records of the Ontario Ministry of Education. Numbers obtained initially by means of the principals' reports of September 30th each year; these include enrollment, numbers of graduates, Ontario scholars and dropouts.
2. The statistical records of the Ontario Universities' Applications Centre at Guelph. Numbers obtained initially from applicants' forms and registrant reports of the universities; these include tabulations of applications and registrations and the weighted average of their Grade 13 school marks.

3. The statistical records of the Ontario Ministry of Colleges and Universities. Numbers obtained initially from applicants' forms and registration reports of the colleges of applied arts and technology.
4. OISE's recent dropout studies.
5. The telephone interview responses of a sample of the dropouts of 1974/75, 1975/76 and 1976/77 from the schools of the ten boards of the strike sample.

This report deals with two phenomena--one concerning dropouts (i.e., "irregular" student flow, in that students leave school before completing their programs), the other analyzes the normal academic transition of two completing groups (those from Grade 12 and Grade 13). As in our other dropout studies we distinguish between two kinds of non-completers, those who leave within the school year and those who leave in the summer between school years (the "no shows"). We have concentrated on the larger group, the within-year dropouts. The largest group of secondary school completers (graduates) makes the transition from secondary school to work but that group is difficult and expensive to study, since it involves tracing the sample into a myriad of occupations. This study ignores that group. The effects the strike may have had on those students are unrecorded.

TABLE i-1

STUDY SAMPLE[1] COMPARED WITH THE POPULATION (ONTARIO, 1975-76) ON TOTAL[2] SECONDARY SCHOOL ENROLLMENT BY SEX

	Sample (1975-76)		Population (1975-76)		
Sex	N	%	N	%	Chi Square
Male	83,896	52.1	313,189	51.8	6.80 $df = 1$ $p < .05$
Female	77,056	47.9	291,971	48.2	
Total Enrollment	160,952	100.0	605,160	100.0	

[1] Consisting of 10 school boards affected by the teachers' strike during the 1975-76 academic year.

[2] Source:

TABLE i-2

STUDY SAMPLE[1] COMPARED WITH THE POPULATION (ONTARIO, 1975-76) ON TOTAL[2] SECONDARY SCHOOL ENROLLMENT BY GRADE LEVEL

	Sample (1975-76)		Population (1975-76)		
Grade Level	N	%	N	%	Chi Square
9	44,745	27.8	163,004	26.9	208.61** $df = 4$ $p < .001$
10	38,724	24.1	148,141	24.5	
11	35,007	21.7	131,692	21.8	
12	27,225	16.9	108,182	17.9	
13	15,251	9.5	54,141	8.9	
Total Enrollment	160,952	100.0	605,160	100.0	

[1] Consisting of 10 school boards affected by the teachers' strike during the 1975-76 academic year.

[2] Source: Ontario Ministry of Education

TABLE i-3

NUMERICAL AND PERCENTAGE DISTRIBUTIONS OF SECONDARY SCHOOL WITHDRAWALS (WITHIN YEAR DROPOUTS) BY SEX FOR SCHOOL BOARDS AFFECTED BY THE TEACHERS' STRIKE DURING THE 1975/76 ACADEMIC YEAR

School Board #	Male		Female		Total
	N	%	N	%	N
01	90	62.1	55	37.9	145
02	313	49.3	322	50.7	635
03	954	59.4	653	40.6	1607
04	217	55.1	177	44.9	394
05	1254	61.1	799	38.9	2053
06	398	51.4	376	48.6	774
07	2031	56.5	1560	43.5	3591
08	4382	56.1	3423	43.9	7805
09	686	56.6	526	43.4	1212
10	471	61.1	300	38.9	771
School Board Combined	10,796	56.9	8,191	43.1	18,987

Chi square = 52.65 $df = 9$ $p \leq .001$

TABLE i-4

NUMERICAL AND PERCENTAGE DISTRIBUTIONS OF SECONDARY SCHOOL WITHDRAWALS (WITHIN YEAR DROPOUTS) BY GRADE LEVEL FOR SCHOOL BOARDS AFFECTED BY THE TEACHERS' STRIKE DURING THE 1975/76 ACADEMIC YEAR

School Board #	Statistic	Grade Level					Total
		9	10	11	12	13	
01	N	24	40	54	14	8	140
	%	17.2	28.5	38.6	10.0	5.7	100.0
02	N	80	151	147	105	151	634
	%	12.6	23.8	23.2	16.6	23.8	100.0
03	N	161	266	452	363	312	1554
	%	10.4	17.1	29.0	23.4	20.1	100.0
04	N	75	74	95	64	70	378
	%	19.8	19.6	25.2	16.9	18.5	100.0
05	N	229	684	513	317	309	2052
	%	11.2	33.3	25.0	15.4	15.1	100.0
06	N	95	140	211	248	112	806
	%	11.8	17.4	26.1	30.8	13.9	100.0
07	N	646	600	801	705	839	3591
	%	17.9	16.7	22.3	19.7	23.4	100.0
08	N	1636	1475	1537	1223	1054	6925
	%	23.6	21.3	22.2	17.7	15.2	100.0
09	N	266	304	294	210	113	1187
	%	22.4	25.6	24.8	17.7	9.5	100.0
10	N	169	156	191	147	122	785
	%	21.5	19.9	24.4	18.7	15.5	100.0
School Board Combined	N	3381	3890	4295	3396	3090	18,052
	%	18.7	21.5	23.9	18.8	17.1	100.0

Chi square = 2265.87 $df = 36$ $p < .001$

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TABLE i-5

NUMERICAL AND PERCENTAGE DISTRIBUTIONS OF SECONDARY SCHOOL WITHDRAWALS (WITHIN YEAR DROPOUTS) BY MONTH OF WITHDRAWAL FOR SCHOOL BOARDS AFFECTED BY THE TEACHERS' STRIKE DURING THE 1975-76 ACADEMIC YEAR

School Board #	Month of Withdrawal																		
	Sept.		Oct.		Nov.		Dec.		Jan.		Feb.		March		April		May and June		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
01	2	1.4	14	9.7	7	4.8	2	1.4	7	4.8	1	.7	1	.7	89	61.3	22	15.2	145
02																			
02	28	4.4	133	20.8	71	11.2	6	.9	70	11.0	80	12.6	98	15.3	77	12.1	74	11.7	637
03	77	4.8	271	16.8	81	5.0	15	.9	446	27.7	221	13.7	128	8.0	188	11.7	184	11.4	1611
04	-	-	75	19.0	36	9.1	18	4.6	59	15.0	53	13.5	64	16.2	17	4.3	72	18.3	394
05	-	-	324	15.8	120	5.9	15	.7	340	16.6	429	21.0	246	12.0	271	13.2	305	14.8	2050
06	3	.4	112	13.9	63	7.8	28	3.5	133	16.	118	14.6	99	12.3	131	16.2	121	14.9	808
07	837	23.3	377	10.5	123	3.4	24	0.7	641	17.9	534	14.9	424	11.8	298	8.3	333	9.2	3591
08	2681	34.3	937	12.0	352	4.5	-	-	349	4.5	1342	17.2	761	9.8	576	7.4	808	10.3	7806
09	138	11.4	142	11.7	126	10.4	79	6.5	145	11.9	114	9.4	101	8.3	11	1.0	356	29.4	1212
10	26	3.3	131	16.5	40	5.0	10	1.3	175	22.1	113	14.2	125	15.8	106	13.4	67	8.4	793
Total	3792	20.0	2516	13.2	1019	5.3	197	1.0	2365	12.4	3005	15.8	2047	10.7	1764	9.3	2342	12.3	19,047

Chi square 4851.19 df=72 $p < .001$

CHAPTER 1

EFFECTS ON DROPOUT RATES

The study addresses itself to two questions:

1. Does the statistical evidence suggest that the strikes of 1975/76 affected the normal dropout movement in the schools of these boards?

From OISE's recent studies of dropouts from Ontario secondary schools it was demonstrated that: (a) The absolute number and the rate of dropping out (i.e., dropouts expressed as a percentage of September enrollment) increased from 1972-1975. Given this general trend what were the dropout rates in the strike boards and the rest of the province in the pre-strike, the strike, and the post-strike years? (b) Grade and month of withdrawal have been found to be important variables related to the pattern of dropping out--males drop out more frequently than females (in roughly a 58:42 ratio), the higher the grade the higher the proportion of dropouts, and September/ October and January/February are "peak" months of dropping out. What are the dropout proportions of these boards in the strike year? How did they differ from their rates of the previous year, and how does the change which they experienced compare with that experienced by the rest of the province? During the strike year do we find a change in the reasons given (by dropouts) for leaving school prematurely? Do their "destinations" shift (i.e., whether they later returned to school, entered other educational institutions, were employed, unemployed, etc.)? Were they influenced by parents and friends to the same degree and in the same way? Do they report similar future plans (particularly in relation to further study)?

2. The second question is: Does the statistical evidence suggest that the strikes affected the normal transition flow of students from secondary schools to tertiary level institutions in Ontario?

Eventually we shall assess both the transition to universities and that to colleges of applied arts and technology. At this time we can report only on the former, because not all the 1976/77 statistics for the college system are available at this time.

Relationship between Year of Withdrawal and Withdrawal Ratios by Grade Level

Is there a significant difference between the ratio of the number of dropouts to the secondary school enrollment of the grade in the pre-strike (1974/75), strike (1975/76) and post-strike (1976/77) years? This question is the product of the following reasoning: Dropouts come from a "pool", the enrollment pool of the grade they are leaving. We know that the rate of loss (the ratio of the dropouts to the enrollment) varies significantly by grade, school and system. But by comparing the system with its own record of loss by grade, we shall see what change occurred during the year of the strike.

Dropout ratios were computed by grade level and for the total grades, for each board, for the three years under study. As can be seen from Table I-1, the withdrawal ratios rose in the strike year in every one of the ten boards. The difference in the ratios of pre-strike and strike years varied from .01 (for systems #03, #05 and #06) to .09 (system #04). The withdrawal ratios for the total sample showed significant increases over all the grades. The highest increase was observed for Grades 12 and 13. The pattern of withdrawal ratios also varied from board to board. For example, system #03 showed no change in three years' withdrawal ratios for Grade 9 and actually a slight decrease in 1975/76 in Grade 10. Boards #06, 07 and 08 showed marked increases for Grades 12 and 13 and only a slight increase or decrease for the lower grades.

All but one (#06) of our sample boards showed a statistically significant increase in the ratio of dropouts in the strike year over the year before. For non-strike boards the dropout ratio showed a *decrease* over these two years.

From the strike to the post-strike years there was a significant decrease in the dropout ratios for school boards numbered 01, 04, 05 and 06. However, over that time the dropout ratios for the remaining boards either increased significantly (#02, 07 and 09) or remained unchanged (#03 and 08).

The dropout ratio for the strike boards as a total sample increased significantly (Z = 33.96) from pre-strike (.08) to the strike (.12) year and remained unchanged for the post-strike year. This upward trend in dropout ratios in the strike year held true for each of the five grades. A slight decrease in the dropout ratios was noted for Grades 10, 11 and 12 in the post-strike year.

For non-strike boards (Ontario total less the strike boards) the dropout ratio for the strike year (.11) was lower than that for either of the other two years under study (.12).

Pattern of Change in Withdrawal Ratio by School Board and Grade

Four main patterns of change in dropout rates by grade were identified. These are present in the expectancy table numbered I-2. The details of the patterns are shown in Table I-3. For example, in system #01 every grade exhibits the common pattern. In Grade 9, in 1974/75 there was a dropout rate of 11%. In the strike year it rose to 14% and in the year following it dropped to 11%. The loss rate in Grade 10 showed an even steeper rise--from 10% to 19% and although it reduced after the strike year, it was not by much (19% to 18%). The Grade 11 pattern was like that of Grade 9 but higher on the scale--e.g., starts at about twice the level (21% *vs.* 11%), rises to 32% and then drops below the initial level (but only from 21% to 15%). The Grade 12 loss rates start and end at about half the Grade 10 level (5% *vs.* 10% pre-strike is 9% *vs.* 18% post-strike) but in the strike year they rose relatively much more severely (160%, from 5% to 13% *vs.* 90%, from 10% to 19%). For this system as a whole the dropout rate rose from 12% to 20% in the strike year but immediately thereafter dropped back to the old level.

Pattern A was the one commonly found. The dropout rate rose in the strike year and then more or less returned to its former level. Statistically we would have expected this to occur 14.4 of the 72 times.[3] In fact, it occurred a little less than half the time. The second most common pattern was for a continual rise in the dropout rate (the strike year merely being part of the prevailing trend). In eight cases the rise in the strike year levelled off. Possibly if we had followed for another year, we might have concluded that this was merely a variant of the main pattern, the recovery being slightly slow. In seven cases there were other patterns, some of them showing reduction in the rate of dropout by grade.

Our interpretation of *Pattern A* is that the strike had a negative effect on the holding power of the school for a larger number of students than was customary for that grade or that system. The rival attraction of some out-of-school activity won over the attraction of schooling. In the following year the results of this in-school/out-of-school contest were about the same as the results of the year before the strike. We would account for the abnormal condition of 1975/76 by attributing it to the strike. *Pattern* A_1 also suggests that the strike had a negative effect on the dropout ratios--they increased. Moreover, although the strike was over, its effects were slow to dissipate because the higher rate more or less levelled off.

Pattern B we interpret as probably not showing any impact from the strike--there is a strong rising trend anyway. For example, in system #02 the Grade 9 dropout rate rose from 4% to 9% to 11%, the Grade 10 rate from 9% to 14% to 21%, the Grade 11 from 10% to 13% to 19%, etc. And moreover, in most cases the rate of increase is rising--e.g., 9% to 12% to 19%, 13% to 22% to 33%.

Pattern C indicates a reduction in the rate of dropping out in the strike year followed by a rise to more or less the original level in the post-strike year. For the strike boards, this pattern was observed only for Grade 10 of system #03 (which had a rate of 7%, 5% and then 6%). However, Pattern C was the dominant pattern for the non-strike boards (i.e., Ontario total minus the strike boards sample). It was observed for Grades 11 and 12 and the total (see Table I-3).

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[3] There are six patterns per system, one for each of five grades and one for the total. There are ten systems, the sample as a whole and the non-strike boards (Ontario total minus the strike sample, 6 x 12 = 72).

Pattern D is the residual "other". It has five sub-patterns, two of them showing a decrease in the strike year which then remained unchanged in the post-strike year (╲▁▁). This was observed for Grades 9 and 10 for the non-strike boards and it did not occur at all for any of the strike boards, whether taken individually or together as a total sample.

The boards of sharp impact seem to have been #01 (12%, 20%, 12%), #04 (14%, 23%, 15%), #08 (14%, 21%, 21%), #09 (4%, 10%, 11%) and #10 (4%, 9%, 10%).

Relationship between Year of Withdrawal and Sex

> Is there a significant difference among the pre-strike, strike and post-strike years with respect to the distribution of dropouts by sex?
>
> Is there evidence that the teachers' strike may have had a different impact on boys than on girls--at least with regard to the decision to drop out of school?

Only one board (#02) showed a significant difference with respect to the sex distribution of its dropouts during these years (see Table I-4). For this board, the percentage of female withdrawals increased during the strike year. For the strike sample as a whole the sex distribution of dropouts in 1974/75 was similar to the distribution for the province as a whole (as reported from the principal's reports). The province as a whole experienced no increase in female dropouts in 1975/76 and only a slight increase in 1976/77; the province apart from strike boards experienced a relative decrease (from 42.3% to 41.7%) followed by an increase in the post-strike year (43%). Thus the pattern of change for the strike boards (╱╲) was a complete reversal of the pattern for the rest of the province (╲╱). Since the strike was the only major change condition in which the boards of this sample shared which was not shared by the rest of the province, the *prima facie* evidence suggests that the strike caused the pattern change. For six out of ten strike boards there was some increase in the proportion of female dropouts; for three of them it was substantial (systems #02, #06 and #09).

Relationship between Year of Withdrawal and Grade Level

> Is there a significant difference among the pre-strike, strike and post-strike years with respect to the distribution of dropouts by grade?

This question might be reworded as:

> Is there any evidence that the teachers' strike may have had a differential impact on students, varying according to the grade the student left?

Table I-5 shows that the percentage of withdrawals coming from Grade 10 decreased in the strike year over the previous year for all of these boards except system #01. The trend reversed in the post-strike year for all boards except #07, #09 and #10. This was also true of the percentage of dropouts from Grade 9 for six of the boards. In the strike year, Board #04 experienced a drop in the percentage of withdrawals from all grades except Grade 13. In other words, in that system the proportion of the year's total dropouts represented by dropouts from Grade 13 rose (to more than double its previous level) and, therefore, the proportion from all other grades reduced. Generally speaking, in the strike year the proportion of the year's dropouts coming from the lower secondary school grades *decreased* or showed little change, and there was a noticeable *increase* in the Grade 13 losses. Then the Grade 13 dropout ratio went down in the post-strike year for all boards except #01, #06 and #10. A pattern of change (i.e., $/\backslash$.) in the dropout ratios was more common in Grades 11, 12 and 13 than other grades. Only in three boards was the shift in the grade level distribution of the dropout pool not statistically significant (systems #01, #02 and #09). In Board #01 the differential impact on grades seems to be diffused--there was some increase (proportionately) in dropping out from Grade 10 and Grade 12, an actual decrease in the proportion of losses from Grade 13 and no change which was of significant dimension. In system #02 the shift also seems to have been diffused except for Grade 13 where the increase was considerable (from 18.4% of the previous year's total to 23.8%), although it must be noted that overall the shift in dropouts by grade is not statistically significant. System #09 gives much the same picture. There the impact, in the strike year, on the level of dropping out from Grade 13 is slight (an increase from 8.3% to 9.5%).

The pattern of change (⟋) in the Grade 13 dropout rates for the non-strike boards shows a steady increase from the pre-strike through the post-strike year. This was markedly different from the corresponding pattern for the strike boards (∧). The disproportionate increase in the loss of Grade 13 students in the strike year, from the strike boards, suggests a strong link between the teachers being on strike and the phenomenon of dropping out from this advanced level of academic school studies.

The dropout grade distribution of the 1974/75 provincial sample study[4] is known. When we compare the percentage distribution of these dropouts with the percentage distribution of the enrollment in the grades of their school systems we obtain the following:

	Grade 9	10	11	12	13	Total
Dropout %	16.8	25.6	26.5	19.4	11.7	100.0
Enrollment %	27.0	24.5	21.7	17.9	8.9	100.0

The disproportionate higher dropout loss occurred at two grade levels--11 and 13.

The comparable 1974/75 percentage distributions for the strike sample's dropouts and enrollment were:

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[4] Sample of 26 boards. See Cicely Watson and Sharon McElroy, Ontario Secondary School Dropout Study, 1974-75. The Ministry of Education, Ontario, 1976; or the abridged version, Cicely Watson, Focus on Dropouts, OISE, 1977.

	Grade 9	10	11	12	13	Total
Dropout %	18.9	25.4	25.0	16.9	13.8	100.0
Enrollment %	28.1	24.6	21.2	16.8	9.3	100.0

Before the strike these boards collectively had a higher proportion of their dropouts from Grade 9 and Grade 13 than the province generally (if we let the large 1974/75 sample stand for the province). However, the Grade 9 and Grade 13 enrollment in these boards represented larger percentages of their enrollment than was the case for the province (28% *vs.* 27% and 9.3% *vs.* 8.9%). So in these strike boards in the pre-strike year (1974/75) we might say that the Grade 13 loss represented much the same share of the loss pool. In the strike year, the Grade 13 share of the year's dropout losses from our sample boards rose from 13.8% to 17.1%. Their Grade 13 enrollment did not experience such a proportionate rise. It did increase as a share of their secondary school enrollment, but only from 9.3% to 9.5%. Therefore, differentially the impact of dropping out from Grade 13 was greater.

Relationship between Year of Withdrawal and Month of Withdrawal--Tables I-6 and I-7

> Is there a significant difference between the pre-strike, strike, and post-strike years with respect to the distribution of dropouts by month of withdrawal?
>
> There are really two questions implicit here:
>
> Was there a significant shift in the proportionate distribution of the dropouts by month in 1975/76 as compared with the other two years?
>
> and
>
> Is the shift related to the dates of the strike?

Strikes occurred on different dates in these boards, and accommodation to strike may become apparent immediately (i.e., right after the resumption of schooling) or it may be delayed. So we must analyze the data board by board. Table I-6 shows, by board, the actual and percentage distribution of the dropouts, by month, for the three years. It would be well to keep in mind the strike dates. They were as follows:

Metro Toronto (six of the ten boards), November 12, 1975-January 18, 1976, on strike

Central Algoma, February 16-April 12, on strike

Sault Ste. Marie
1. February 5, 1976, teachers work to rule.
2. February 5-April 15, board countered with an alteration in the terms of employment (setting an 8 a.m.-5 p.m. day and cancelling policy on leave).
3. February 15-April 1, board reduced salaries 25%.
4. March 3-April 1, there were rotating strikes at schools.
5. April 14 and 15, board closed schools.

(So, in effect, this "strike" lasted in one form or another, off and on, from February 5th to April 15th.)

Kirkland Lake, January 12, 1976-March 12, 1976 on strike.

Windsor
1. March 30, 1976, one-day strike.
2. March 31, work to rule.
3. April 1-May 7, 1976, on strike.
4. April 1-May 7, board locked out the teachers and closed schools.

We found that the month of withdrawal was significantly related to the year of withdrawal for every one of the boards affected by strike. There was a statistically significant change in the distribution of dropouts by month over the three years. Not all of this is related to the strikes, however. For example, there was a large absolute and proportionate increase in dropouts from system #05 in September--this was before the strike took place. Much more revealing is the set of statistics in Tables I-7a to I-7d. Here we compare the percentage distribution of the dropouts before and after the strike months, in the three years. For the Metro boards, the first six, (using different code numbers from those used before), the division is pre-December and post-December. For the other boards it is before and after the appropriate months or period. There took place a statistically significant shift in the pre/post-strike month distribution in all boards. However, the shift for Board #05 was not consistent with that of the other Metro boards. Our conclusion overall would be that in Metro there was a significant shift in the distribution of the dropout loss before and after the strike month.

Except for that one board, the percentages of dropouts were higher each year in the months after the strike than before but in the year of the strike the discrepancy was significantly greater than in the other two years.

For the next two boards (Table I-7b) the pre- and post-strike years saw much lower dropouts in the period April-June than the strike year did. In one case (#02), the system had much higher losses in all years from September to January, but in the strike year the differential was greatly reduced. In the case of the other board (#01), in the pre-strike year it lost double the number of dropouts in the September-January period than it did in the later one. In the strike year, however, this shifted to more than three times the former level and even in the year following the strike it remained higher, although not at the previous level. (This system lost 111 of its year's 145 dropouts, in the months following the strike.)

It has been claimed that the dropout effect of teacher strikes is temporary. The loss rates increase following the strike months but most of these students re-enter the following year and thereafter the board reverts to its usual dropout pattern. The evidence of three years does not support that contention, although if we followed the dropout picture of these boards for a longer number of years this might well eventually prove to be true. However, like much statistical "averaging" it blurs the picture. The effect on a youth's school career of dropping out is immediate. That particular year of study is spoiled. Some "salvaging" can be effected. Leaving school is not an irrevocable step in Ontario. But the provincial study of dropouts, which included a study of the September 1975 re-entrants, showed that there was a high probability of non-completion (about one in two) and (1) the more frequent the dropping out and re-entering the more rapid the increase in the probability of non-completion, and (2) the higher the age of the re-entrant (particularly over 18) the lower the probability of completion.

Unfortunately, these are "stock" statistics. They do not show the flow of individuals. So we cannot tell whether, for example, the 399 students of Board #02 in Table I-7a re-entered its schools in the beginning of the following year and were not among the 427 who left during the first (or even the post-December) period in the year following the strike.

In Table I-7c the board's pattern seems to be a loss of about 77% of the year's total during the period from September to March. The strike year interrupts this but the recovery is immediate. In 1975/76 there was a sharp increase in the post-strike months' "share", although it was still less than that of the earlier period (hardly surprising since period 1 = 7 months and period 2 = 2 months). Much the same pattern is evidenced in Table I-7d for the one board represented there.

In summary: to our mind, unquestionably, the statistical evidence is strong that a strike changes the monthly dropout flow of a board. The number absolutely and proportionately increases in the period following the strike. In the year following the strike, the balance between the pre- and post-strike month is either restored or reverts closer to the original position.

Year of Withdrawal (Pre-Strike vs. Strike) in Relation to the Interaction between Sex and Grade Level--Table I-8

> Is there a significant difference among the pre-strike, strike and post-strike years with respect to the interaction between sex and grade level?

To phrase this question differently:

> Is there evidence that the strike may have had a different impact on the dropout losses by sex in the different grades?

In these boards there is a considerable amount of variability between the distributions by sex and grade for the three years. For systems #08 and #10 the interaction between sex and grade level was more pronounced (i.e., shows a higher level of significance) in the strike than the non-strike years. For Boards #04 and #05 the relationship between sex and grade level was found to be significant only for the pre-strike year. For the strike year, the relationship between sex and grade level was significant only for Boards #08 and #10; for the post-strike year this was true of Boards #02, #03, #06 and #08. A reversal in trend took place for the Grade 9 dropouts of Boards #01 and #08; there was a relative increase in the proportion of female withdrawals. The portion of Table I-8, which might have been worth further analysis if we had the provincial dropout figures by grade and sex, is the Grade 13 columns. There the percentages of male dropouts increased and their female counterparts decreased in the strike year for all boards except #06, #07 and #10. However, provincially reported dropouts are by age and sex or by grade; data by grade and sex are not available.

Year of Withdrawal in Relation to the Interaction between Sex and Month of Withdrawal

> Is there a significant difference among the pre-strike, strike and post-strike years with respect to the pattern of dropouts by sex and month of withdrawal?
>
> To phrase this question differently:
>
> Is there any evidence that the strike may have had a different impact on the dropout losses by sex in the different months?

There is considerable variation among and within school boards with regard to the patterns of withdrawal by sex and month of withdrawal (see Table I-9). The relationship between the two modes of classification was found to be significant for five (#02, #04, #06, #07 and #08) of the ten school boards, and for the sample as a whole during the strike year. Relatively speaking, the proportion of female dropouts increased during the post-strike months. Let us look at those boards where the change in the relationship between sex and month of withdrawal was found to be significant: For Board #02, the proportion of female dropouts in the strike year *rose* during all months after the strike (except April). In the post-strike year the dropout losses *reduced* for females in the post-strike year for all months except November and February. In system #04 the female proportion in mid-strike rose from 33% to 58% and then dropped to 55%. In the post-strike year it dropped in the month of January from 53% to 40% and then rose to 42%. Over the three years, in February the female proportions were 33%, 55%, 41%. In system #06, it rose in March from 43% to 48% and then dropped to 32% in the post-strike year. In system #08 no dropouts are recorded for December (during the strike). The female share in November had risen (over the share that month of the previous year) but from September-December the shift by sex each month was slight. After the strike months, the female share rose for each of three months and then reduced for each of the next three months. There was a reversal in the trend during the post-strike years.

Before the strike, the 1974/75 percentage distribution of dropouts by sex and month of the strike sample and provincial sample was as follows:

		Male		Female	
September	(a) strike	52.4		47.6	
	(b) provincial	54.6		45.4	
October	(a)	59.4		40.6	
	(b)	59.5		40.5	
November	(a)	59.3		40.7	
	(b)	59.1		40.9	
December	(a)	60.5		39.4	
	(b)	59.9		40.1	
January	(a)	55.7		44.3	
	(b)	52.8		47.2	
February	(a)	61.1		38.9	
	(b)	58.6		41.4	
March	(a)	56.9		43.1	
	(b)	57.7		42.3	
April	(a)	60.0		40.0	
	(b)	59.1		40.9	
May/June	(a)	59.3		40.7	
May	(b)	60.7)	61.5	39.3)	38.5
June	(b)	67.5)		32.5)	

If we check the boards where a significant shift by sex and month seems to have occurred in the strike year, we note the following type of development: Board #04 had had a much lower female participation in the

February losses in 1974/75 than was the experience either in the province or in the sample of ten boards experiencing strike. In the mid-strike month the female participation rose sharply--probably above the rise generally experienced in the province but we cannot know that because the Ministry data are not recorded by sex and month. In the subsequent months the sex ratio among the dropouts from this board greatly differed from that it experienced in the pre- and post-strike years, but it still experienced a higher level of female participation than seems to be general. In summary: There does seem to have been a differential impact by sex. The strike had a more immediate effect on females than males and this is manifested by the rise in dropouts in the months following the strike. It would be unwise, however, to push this conclusion too far, since the Ministry's data for the province as a whole is not such as to permit us to cross-classify dropouts by sex and month of leaving.

General Summary

There is statistical evidence of changes in the pattern and incidence of dropping out of secondary school which occurred in the strike year in each of the boards of our sample. Moreover, when taken as total this sample exhibits much the same evidence of change. The rest of the boards of the province (i.e., the group not experiencing strike) did not experience these changes in the pattern and incidence of dropout. In fact, in the strike year the trend of dropout in the strike sample ran counter to the trend for the rest of the province. We regard this as *prima facie* evidence that the disturbance was caused by the strike since it was the only gross change condition shared by the ten boards of the strike sample. The changes observed were the following:

1. There was an abnormal increase in dropout rates generally.
2. There is some evidence that females were more adversely affected than males (i.e., their representation among the dropouts rose disproportionately). In one board the distribution by sex in the strike year was significantly

different from that of the year before but for the most part the shift was not of that magnitude.

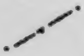
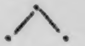
3. However, the change in the strike year in the incidence of dropout by grade was striking, and Grade 13 was clearly adversely affected. In the non-strike boards there was a steady increase in the Grade 13 loss rate over these years. In the strike boards there was a disproportionate rise in the Grade 13 losses in the strike year and thereafter a decrease in the rate. The non-strike pattern of loss was . The strike pattern of loss was .
4. The evidence strongly suggests that the strike changed the monthly loss flow in the boards affected. The dropouts pile up in the months following the strike and in the year following the flow either reverts to normal or takes a pattern closer to the normal one.

TABLE I-1

SCHOOL BOARDS AFFECTED BY TEACHERS' STRIKE COMPARED WITH ONTARIO TOTAL ON ENROLLMENT, NUMBER OF SECONDARY SCHOOL WITHDRAWALS (WITHIN YEAR DROPOUTS) AND WITHDRAWAL RATIOS BY GRADE FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-77) YEARS

School Board #	Year of Withdrawal	Enrollment[1] by Grade						Number of Withdrawals by Grade						Withdrawal Ration by Grade						
		9 N	10 N	11 N	12 N	13 N	Total N	9 N	10 N	11 N	12 N	13 N	Total[2] N	9 R	10 R	11 R	12 R	13 R	Total R	Z
01	Pre-Strike	200	218	157	122	38	735	22	21	33	6	6	88	.11	.10	.21	.05	.16	.12	
	Strike	183	219	175	116	39	732	25	41	56	15	8	145	.14	.19	.32	.13	.21	.20	4.11**
	Post-Strike	190	187	177	155	40	749	8	33	26	14	8	89	.04	.16	.15	.09	.20	.12	4.18**
02	Pre-Strike	1,140	1,142	1,017	885	567	4,751	48	103	100	79	74	404	.04	.09	.10	.09	.13	.09	
	Strike	1,094	1,093	1,108	912	695	4,902	80	152	148	105	152	637	.07	.14	.13	.12	.22	.13	7.11**
	Post-Strike	1,077	1,186	1,111	1,006	653	5,033	114	244	209	195	219	981	.11	.21	.19	.19	.33	.19	6.77**
03	Pre-Strike	5,664	5,255	4,729	3,939	2,309	21,896	142	340	388	290	199	1,359	.03	.07	.08	.07	.09	.06	
	Strike	5,747	5,148	4,854	4,064	2,340	22,153	167	276	469	376	323	1,611	.03	.05	.10	.09	.14	.07	4.46**
	Post-Strike	5,308	5,174	4,842	4,214	2,474	22,012	179	308	420	372	274	1,553	.03	.06	.09	.09	.11	.07	.08
04	Pre-Strike	453	434	357	293	138	1,675	48	56	78	41	17	* 240	.11	.13	.21	.14	.12	.14	
	Strike	499	416	394	288	[illegible]	1,730	78	77	99	67	73	394	.16	.19	.25	.23	.55	.23	6.33**
	Post-Strike	414	461	358	325	149	1,707	42	78	71	37	30	258	.10	.17	.20	.11	.20	.15	5.73**
05	Pre-Strike	9,390	9,066	7,198	5,710	3,282	34,646	225	600	438	246	191	1,700	.02	.07	.06	.04	.06	.05	
	Strike	9,616	9,103	7,830	5,690	3,549	35,788	229	685	513	317	309	2,053	.02	.08	.07	.06	.09	.06	4.90**
	Post-Strike	9,364	9,227	8,009	6,009	3,594	36,203	242	625	487	247	256	1,857	.03	.07	.06	.04	.07	.05	1.59**
06	Pre-Strike	1,826	1,755	1,539	1,263	503	6,866	145	197	190	167	57	756	.08	[illegible]	.12	.13	.11	.11	
	Strike	1,801	1,711	1,565	1,327	538	6,942	95	140	212	249	112	808	.05	[illegible]	.14	.19	.21	.12	1.22
	Post-Strike	1,734	1,696	1,614	1,339	585	6,968	86	126	192	171	104	679	.05	.07	.12	.13	.18	.10	3.62**
07	Pre-Strike	8,655	7,195	6,461	4,757	2,594	29,662	564	501	575	408	579	2,627	.06	.07	.09	.09	.22	.09	
	Strike	8,951	7,347	6,813	5,070	2,540	30,721	646	600	801	705	839	3,591	.07	.08	.12	.14	.33	.12	3.56**
	Post-Strike	8,699	7,521	7,019	5,633	2,883	31,755	905	640	759	867	825	3,995	.10	.08	.11	.15	.29	.13	[illegible]**
08	Pre-Strike	10,521	8,414	7,430	5,913	3,507	35,785	1,111	1,236	1,201	511	802	4,861	.11	.15	.16	.09	.23	.14	
	Strike	10,741	8,527	7,740	6,163	3,604	36,775	1,844	1,663	1,733	1,378	1,188	7,806	.17	.20	.22	.22	.33	.21	27.11**
	Post-Strike	10,509	8,316	7,831	6,231	3,903	36,790	1,840	1,706	1,694	1,220	1,162	7,622	.18	.20	.22	.20	.30	.21	.69
09 *	Pre-Strike	3,438	3,048	2,737	2,227	990	12,440	111	130	116	76	39	472	.03	.04	.04	.03	.04	.04	
	Strike	3,461	3,110	2,791	2,299	1,063	12,724	272	311	300	214	115	1,212	.08	.10	.11	.09	.11	.10	18.16**
	Post-Strike	3,705	2,945	2,892	2,382	486	12,910	344	342	379	277	130	1,472	.09	.12	.13	.12	.13	.11	7.49*
10	Pre-Strike	2,690	2,039	1,688	1,285	617	8,319	44	88	96	66	76	370	.02	.04	.06	.05	.12	.04	
	Strike	2,652	2,050	1,737	1,296	750	8,485	171	158	193	148	123	793	.06	.08	.11	.11	.16	.09	12.51**
	Post-Strike	2,740	1,961	1,857	1,264	740	8,562	202	167	202	123	145	839	.07	.09	.11	.10	.20	.10	1.01
Sub Total 1: Strike Boards Combined	Pre-Strike	43,977	38,566	33,313	26,394	14,545	156,795	2,460	3,272	3,215	1,890	2,040	12,877	.06	.09	.10	.07	.14	.08	
	Strike	44,745	38,724	35,007	27,225	15,251	160,952	3,607	4,103	4,524	3,574	3,242	19,050	.08	.11	.13	.13	.21	.12	33.96**
	Post-Strike	43,740	38,674	35,710	28,558	16,007	162,689	3,961	4,269	4,439	3,523	3,153	19,345	.09	.11	.12	.12	.20	.12	[illegible]
Sub Total 2: Non-Strike Boards	Pre-Strike	117,798	107,085	94,228	77,215	36,529	432,855	7,460	12,799	14,059	12,215	5,813	52,346	.06	.12	.14	.16	.16	.12	
	Strike	118,259	109,417	96,685	80,957	38,890	444,208	5,834	11,506	12,900	11,566	6,143	48,045	.05	.11	.13	.14	.16	.11	14.79**
	Post-Strike	118,579	109,959	99,531	82,791	39,506	450,366	6,385	12,125	14,053	14,352	7,268	54,183	.05	.11	.14	.17	.18	.12	18.70**
Ontario Total	Pre-Strike	161,775	145,651	127,541	103,609	51,074	589,650	9,920	16,071	17,274	14,105	7,853	65,223	.06	.11	.14	.14	.15	.11	
	Strike	163,004	148,141	131,692	108,182	54,141	605,160	9,441	15,699	17,424	15,140	9,391	67,095	.06	.11	.13	.14	.17	.11	.45
	Post-Strike	162,319	148,633	135,241	111,349	55,513	613,055	10,023	16,060	18,161	17,627	10,185	72,056	.06	.11	.13	.16	.18	.12	11.56**

[1] As of September 30th

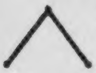
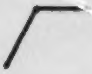
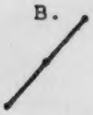
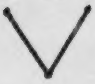
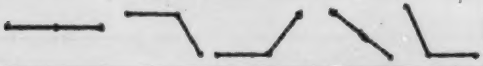
[2] Including "no information" cases who were distributed proportionately over the grades without distorting the relative grade distribution of students for whom information pertaining to grade level was available.

* This school board was affected by the teachers' strike during the pre-strike (1974-75) year as well.

Note: The provincial dropout data included both the "within-year" and the "no-show" dropouts, whereas the corresponding data for the strike boards sample included only the "within-year" dropouts.

TABLE I-2

PATTERN[1] OF CHANGE IN WITHDRAWAL RATIOS COMBINING GRADE LEVEL AND SCHOOL BOARD DISTRIBUTIONS TOGETHER FOR THE STRIKE AND NON-STRIKE BOARDS

Pattern of Change	Observed 0	Expected E	O-E	$(O-E)^2$	$\frac{(O-E)^2}{E}$
A.  Increased from the pre-strike to strike and then decreased in the post-strike year.	33	14.4	18.6	345.96	24.02
A.1  Increased from pre-strike to strike year and no change from the strike to the post-strike year	8	14.4	-6.4	40.96	2.84
B.  Consistently increased from the pre-strike through the post-strike year.	20	14.4	5.6	31.36	2.18
C.  Decreased from the pre-strike to strike and then decreased in the post-strike year.	4	14.4	-10.4	108.16	7.51
D. Other sub-patterns 	7	14.4	-7.4	54.76	3.80
TOTAL	72	72.0	0		40.35

Chi square = 40.35 d.f. = 4 $p \leq .001$

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[1] Based on Table I-3

TABLE I-3

PATTERN OF CHANGE IN WITHDRAWAL RATIOS BY SCHOOL BOARD AND GRADE FROM THE PRE-STRIKE (1974-77) THROUGH POST-STRIKE YEAR (1976-77)

School Board #	Gr. 9			Gr. 10			Gr. 11			Gr. 12			Gr. 13			Total		
	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post Str.
01	.11	.14	04	.10	.19	.18	.21	.32	.15	.05	.13	09	.16	.21	.20	12	20	.12
02	.04	.07	.11	.09	.14	.21	.10	.13	.19	.09	.12	.19	13	.22	33	09	.13	.19
03	.03	.03	.03	.07	.05	.06	.08	.10	.09	.07	.09	.09	.09	.14	.11	.06	.07	.07
04	.11	.16	.10	.13	.19	.17	.21	.25	.20	.14	.23	.11	12	.55	.20	.14	.23	.15
05	02	.02	.03	.07	.08	.07	.06	.07	.06	.04	.06	.04	.06	.09	.07	.05	.06	.05
06	.18	.05	.05	.11	.08	.07	.12	.14	.12	.13	.14	.13	.11	.21	.18	.11	.12	.10
07	.06	.07	.10	.07	.08	.08	.09	.12	.11	.09	.14	.15	.22	.33	.29	.09	.12	.13
08	.11	.17	.18	.15	.20	.20	.16	.22	.22	.09	.22	.20	.23	.33	.30	.14	.21	.21
09 Windsor	.03	.08	.09	.04	.10	.12	.04	.11	.13	.05	.09	.12	.04	.11	.13	.04	.10	.11
10 York	.02	.06	.07	.04	.08	.09	.06	.11	.11	.05	.11	.10	.12	.16	.20	.04	.09	.10
Strike Boards Combined	.06	.08	.08	.09	.11	.10	.10	.13	.11	.07	.13	.11	.14	.21	.18	.08	.12	.11
Non-Strike Boards	.06	.05	.05	.12	.11	.11	.14	.13	.14	.16	.14	.17	.16	.16	.18	.12	.11	.12

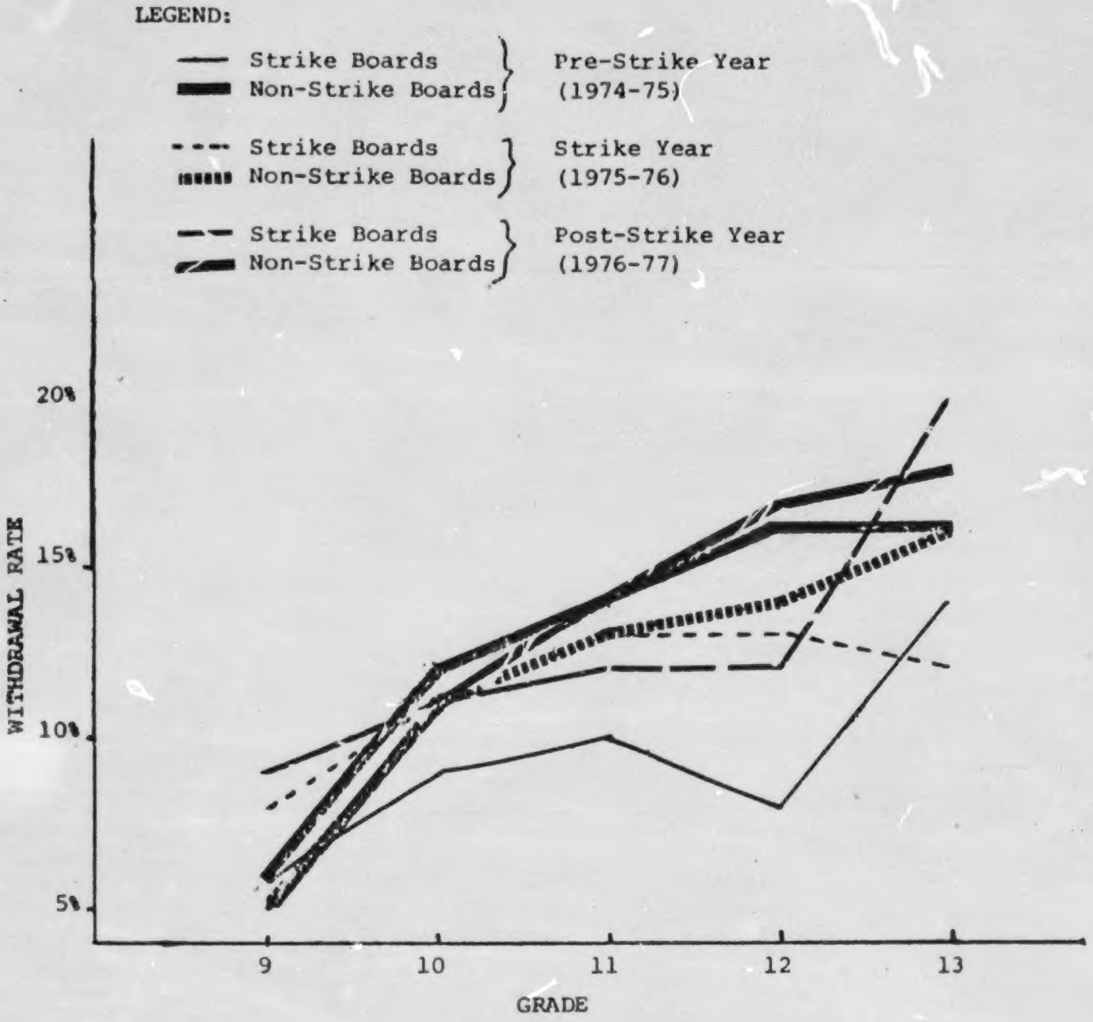

Figure 1.a School Boards Affected by Strike Compared with Non-Strike Boards on Rate of Withdrawal by Grade for the Pre-Strike (1974-75), and Strike (1975-76) and Post-Strike (1976-77) Years-- Based on Table I-1.

TABLE I-4

SCHOOL BOARDS AFFECTED BY TEACHERS' STRIKE COMPARED WITH ONTARIO TOTAL ON NUMERICAL AND PERCENTAGE DISTRIBUTIONS OF SECONDARY SCHOOL WITHDRAWALS (WITHIN YEAR DROPOUTS) BY SEX FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-77) YEARS

School Board #	Year of Withdrawal	Male N	Male %	Female N	Female %	Total N	Chi Square *df*=2
01	Pre-Strike	47	53.4	41	46.6	88	1.75
	Strike	90	62.1	55	37.9	145	
	Post-Strike	51	57.3	38	42.7	89	
02	Pre-Strike	239	60.1	159	39.9	398	11.39 **
	Strike	313	49.3	322	50.7	635	
	Post-Strike	522	53.2	459	46.8	981	
03	Pre-Strike	768	57.7	563	42.3	1,331	1.21
	Strike	954	59.4	653	40.6	1,607	
	Post-Strike	925	59.6	628	40.4	1,553	
04	Pre-Strike	126	52.7	114	47.3	240	.42
	Strike	217	55.1	177	44.9	394	
	Post-Strike	141	54.7	117	45.3	258	
05	Pre-Strike	1,015	60.0	678	40.0	1,693	3.46
	Strike	1,254	61.1	799	38.9	2,053	
	Post-Strike	1,169	62.9	688	37.1	1,857	
06	Pre-Strike	429	56.7	327	43.3	756	5.07
	Strike	398	51.4	376	48.6	774	
	Post-Strike	380	56.0	299	44.0	679	
07	Pre-Strike	1,552	59.1	1,075	40.9	2,627	4.07
	Strike	2,031	56.5	1,560	43.5	3,591	
	Post-Strike	2,316	58.0	1,679	42.0	3,995	
08	Pre-Strike	2,757	56.9	2,085	43.1	4,842	1.29
	Strike	4,382	56.1	3,423	43.9	7,805	
	Post-Strike	4,263	55.9	3,359	44.1	7,622	
09[1]	Pre-Strike	292	61.9	180	38.1	472	3.95
	Strike	686	56.6	526	43.4	1,212	
	Post-Strike	847	57.5	625	42.5	1,472	
10	Pre-Strike	220	62.0	135	38.0	355	3.73
	Strike	471	61.1	300	38.9	771	
	Post-Strike	479	57.1	360	42.9	839	
Sub-total 1: School Boards Combined	Pre-Strike	7,445	58.2	5,357	41.8	12,802	5.25
	Strike	10,796	56.9	8,191	43.1	18,987	
	Post-Strike	11,093	57.3	8,252	42.7	19,345	
Sub-total 2: Total withdrawals for Ont. Less Sub-Total 1	Pre-Strike	30,222	57.7	22,199	42.3	52,421	4.07*
	Strike	28,038	58.3	20,070	41.7	48,108	(*df*=1)
	Post-Strike	30,027	57.0	22,684	43.0	52,711	
Total withdrawals for Ontario[2]	Pre-Strike	37,667	57.8	27,556	42.2	65,223	.22
	Strike	38,834	57.9	28,261	42.1	67,095	(*df*=1)
	Post-Strike	41,120	57.1	30,936	42.9	72,056	

[1] This school board was affected by the teachers' strike during the pre-strike year (1974-75) as well.

[2] Source: Ontario Ministry of Education.

*Significant at the .05 level.
**Significant at the .01 level.

Note: The provincial dropout data included both the "within-year" and the "no-show" dropouts, whereas the corresponding data for the strike sample included only the "within-year" dropouts.

TABLE I-5

SCHOOL BOARDS AFFECTED BY TEACHERS' STRIKE COMPARED WITH ONTARIO TOTAL ON NUMERICAL AND PERCENTAGE DISTRIBUTIONS OF SECONDARY SCHOOL WITHDRAWALS (WITHIN YEAR DROPOUTS) BY GRADE LEVEL FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-77) YEARS

School Board #	Year of Withdrawal	Grade Level										Total	Chi Square
		9		10		11		12		13			
		N	%	N	%	N	%	N	%	N	%	N	d.f.=8
01	Pre-Strike	21	25.3	20	24.1	31	37.4	6	7.2	5	6.0	83	14.32
	Strike	24	17.2	40	28.5	54	38.6	14	10.0	8	5.7	140	
	Post-Strike	8	9.1	32	36.4	26	29.5	14	15.9	8	9.1	88	
02	Pre-Strike	45	11.8	97	25.6	94	24.7	74	19.5	70	18.4	380	7.52
	Strike	80	12.6	151	23.8	147	23.2	105	16.6	151	23.8	634	
	Post-Strike	92	11.7	196	24.8	168	21.3	157	19.9	176	22.3	789	
03	Pre-Strike	136	10.5	324	25.0	371	28.6	277	21.3	190	14.6	1,298	38.18***
	Strike	161	10.4	266	17.1	452	29.0	363	23.4	312	20.1	1,554	
	Post-Strike	175	11.5	301	19.9	410	27.0	363	24.0	267	17.6	1,516	
04	Pre-Strike	43	20.0	50	23.3	70	32.5	37	17.2	15	7.0	215	26.64***
	Strike	75	19.8	74	19.6	95	25.2	64	16.9	70	18.5	378	
	Post-Strike	42	16.3	78	30.3	71	27.5	37	14.3	30	11.6	258	
05	Pre-Strike	225	13.2	600	35.3	438	25.8	246	14.5	191	11.2	1,700	19.20*
	Strike	229	11.2	685	33.3	513	25.0	317	15.4	309	15.1	2,053	
	Post-Strike	242	13.0	625	33.7	487	26.2	247	13.3	256	13.8	1,857	
06	Pre-Strike	138	19.1	188	26.1	181	25.1	159	22.1	55	7.6	721	64.67***
	Strike	95	11.8	140	17.4	211	26.1	248	30.8	112	13.9	806	
	Post-Strike	84	12.6	123	18.5	188	28.3	168	25.3	102	15.3	665	
07	Pre-Strike	564	21.4	501	19.1	575	21.9	408	15.5	579	22.1	2,627	79.14***
	Strike	645	17.9	600	16.7	801	22.3	705	19.7	840	23.4	3,591	
	Post-Strike	902	22.6	639	16.0	758	19.0	866	21.7	824	20.7	3,989	
08	Pre-Strike	931	22.8	1037	25.5	1007	24.7	672	16.5	428	10.5	4,075	85.47***
	Strike	1636	23.6	1475	21.3	1537	22.2	1223	17.7	1054	15.2	6,925	
	Post-Strike	1580	24.2	1464	22.4	1454	22.2	1047	16.0	997	15.2	6,542	
09 [1]	Pre-Strike	110	23.5	129	27.5	115	24.5	76	16.2	39	8.3	469	5.75
	Strike	266	22.4	304	25.6	294	24.8	210	17.7	113	9.5	1,187	
	Post-Strike	326	23.4	324	23.2	359	25.8	262	18.8	123	8.8	1,394	
10	Pre-Strike	44	11.9	88	23.8	96	26.0	66	17.8	76	20.5	370	28.76***
	Strike	169	21.5	156	19.9	191	24.4	147	18.7	122	15.5	785	
	Post-Strike	187	24.1	153	19.8	187	24.1	114	14.7	134	17.3	775	
Sub-total 1: School Boards Combined	Pre-Strike	2257	18.9	3034	25.4	297[illegible]	25.0	2021	16.9	1648	13.8	11,938	144.43***
	Strike	3380	18.7	3891	21.6	4295	23.8	3396	18.8	3091	17.1	18,053	
	Post-Strike	3638	20.4	3935	22.0	4108	23.0	3275	18.3	2917	16.3	17,873	
Sub-total 2: Total Withdrawals for Ontario Less Sub-Total 1	Pre-Strike	7663	14.4	13037	24.5	14296	26.8	12084	22.7	6205	11.6	53,285	127.31*** (df=4)
	Strike	5061	12.4	11808	24.1	13129	26.8	11744	23.9	6300	12.8	49,042	
	Post-Strike	6385	11.8	12125	22.4	14053	25.9	14352	26.5	7268	13.4	54,183	
Total Withdrawals for Ontario [2]	Pre-Strike	9920	15.2	16071	24.6	17274	26.5	14105	21.6	7853	12.0	65,223	164.21*** (df=4)
	Strike	9441	14.1	15699	23.4	17424	25.9	15140	22.6	9391	14.0	67,095	
	Post-Strike	10023	13.9	16060	22.3	18161	25.2	17627	24.5	10185	14.1	72,056	

[1] This school board was affected by the teachers' strike during the pre-strike year (1974-75) as well.

[2] Source: Ontario Ministry of Education.

* Significant at the .05 level.

*** Significant at the .001 level.

Note: the provincial dropout data included both the "within-year" and the "no-show" dropouts, whereas the corresponding data for the strike sample included only the "within-year" dropouts.

TABLE I-6

NUMERICAL AND PERCENTAGE DISTRIBUTIONS OF SECONDARY SCHOOL WITHDRAWALS (WITHIN YEAR DROPOUTS) FROM SCHOOL BOARDS AFFECTED BY TEACHERS' STRIKE BY MONTH OF WITHDRAWAL FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-77) YEARS

School Board #	Year of Withdrawal	Month of Withdrawal																		Total Withdrawals	Chi square df= 14
		Sept.		Oct.		Nov.		Dec.		Jan.		Feb.		March		April		May & June			
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	
01	Pre-Strike	7	8.0	19	21.5	7	8.0	1	1.1	7	8.0	7	8.0	19	21.5	5	5.7	16	18.2	88	129.76 ***
	Strike	2	1.4	14	9.7	7	4.8	2	1.4	7	4.8	1	.7	1	.7	89	61.3	22	15.2	145	
	Post-Strike	-	-	17	19.1	5	5.6	1	1.1	3	3.4	18	20.2	10	11.2	14	15.7	21	23.7	89	
02	Pre-Strike	24	5.9	82	20.5	64	15.8	29	7.2	28	6.9	43	10.6	41	10.1	60	14.9	33	8.1	404	64.35 ***
	Strike	28	4.4	133	20.8	71	11.2	6	.9	70	11.0	80	12.6	98	15.3	77	12.1	74	11.7	637	
	Post-Strike	127	12.9	170	17.3	130	13.3	58	5.9	105	10.7	98	10.0	95	9.7	97	9.9	101	10.3	981	
03	Pre-Strike	120	8.8	307	22.6	171	12.6	122	9.0	159	11.7	144	10.6	77	5.7	155	11.4	104	7.6	1,359	352.14 ***
	Strike	77	4.8	271	16.8	81	5.0	15	.9	446	27.7	221	13.7	128	8.0	188	11.7	184	11.4	1,611	
	Post-Strike	100	6.4	252	16.2	218	14.0	122	7.9	239	15.4	172	11.1	121	7.8	148	9.5	181	11.7	1,553	
04	Pre-Strike	-	-	72	30.1	42	17.5	20	8.3	22	9.2	21	8.7	19	7.9	21	8.7	23	9.6	240	68.36 ***
	Strike	-	-	75	19.0	36	9.1	18	4.6	59	15.0	53	13.5	64	16.2	17	4.3	72	18.3	394	
	Post-Strike	-	-	59	22.9	43	16.7	32	12.4	29	11.2	17	6.6	22	8.5	21	8.1	35	13.6	258	
05	Pre-Strike	-	-	342	20.1	230	13.5	161	9.5	228	13.4	229	13.5	87	5.1	260	15.4	163	9.5	1,700	456.00 ***
	Strike	-	-	327	15.9	120	5.8	15	.7	340	16.6	429	21.0	246	12.0	271	13.2	305	14.8	2,053	
	Post-Strike	-	-	260	14.	325	17.5	148	8.0	257	13.8	216	11.6	251	13.5	205	11.0	195	10.5	1,857	
06	Pre-Strike	164	21.8	147	19.4	85	11.2	37	4.9	22	2.9	77	10.2	69	9.1	59	7.8	96	12.7	756	274.69 ***
	Strike	3	.4	112	13.9	63	7.8	28	3.5	133	16.4	118	14.6	99	12.3	131	16.2	121	14.9	808	
	Post-Strike	39	5.7	116	17.1	130	19.2	38	5.6	63	9.3	83	12.2	76	11.2	72	10.6	62	9.1	679	
07	Pre-Strike	144	5.5	510	19.4	339	12.9	158	6.0	450	17.1	311	11.8	167	6.4	214	8.2	334	12.7	2,627	540.99 ***
	Strike	837	23.3	377	10.5	123	3.4	24	.7	642	17.9	534	14.9	423	11.8	298	8.3	333	9.2	3,591	
	Post-Strike	1126	28.1	342	8.6	303	7.6	181	4.5	579	14.5	563	14.1	247	6.2	231	5.8	423	10.6	3,995	
08	Pre-Strike	1,265	26.1	583	12.0	476	9.8	269	5.5	542	11.1	559	11.5	236	4.9	477	9.8	454	9.3	4,861	1148.52 ***
	Strike	2,681	34.3	937	12.0	352	4.5	-	-	349	4.5	1,342	17.2	761	9.8	576	7.4	808	10.3	7,806	
	Post-Strike	2,384	31.3	1129	14.8	695	9.1	361	4.7	617	8.1	722	9.5	448	5.9	536	7.0	730	9.6	7,622	
09[1]	Pre-Strike	54	11.4	80	17.0	60	12.7	4	.8	80	17.0	42	8.9	42	8.9	46	9.7	64	13.6	472	232.52 ***
	Strike	138	11.4	142	11.7	126	10.4	79	6.5	145	11.9	114	9.4	101	8.3	11	1.0	356	29.4	1,212	
	Post-Strike	358	24.3	142	9.6	157	10.7	83	5.6	145	9.9	134	9.1	121	8.2	121	8.2	211	14.4	1,472	
10	Pre-Strike	6	1.6	73	19.7	65	17.6	38	10.3	15	4.1	94	25.3	38	10.3	11	3.0	30	8.1	370	234.95 ***
	Strike	26	3.3	131	16.5	40	5.0	10	1.3	175	22.1	113	14.2	125	15.8	106	13.4	67	8.4	793	
	Post-Strike	10	1.2	180	21.4	98	11.7	57	6.8	129	15.4	110	13.1	69	8.2	68	8.1	118	14.1	839	
School Boards Combined	Pre-Strike	1,784	13.9	2,215	17.2	1,539	11.9	839	6.5	1,553	12.1	1,527	11.8	795	6.2	1,308	10.2	1,317	10.2	12,877	1837.82 ***
	Strike	3,792	19.9	2,519	13.2	1,019	5.3	197	1.0	2,366	12.4	3,005	15.8	2,046	10.8	1,764	9.3	2,342	12.3	19,050	
	Post-Strike	4,144	22.4	2,687	15.3	2,104	10.9	1,081	5.6	2,166	9.9	2,133	10.0	1,460	7.1	1,513	8.0	2,077	10.8	19,345	

[1] This school board was affected by the teachers' strike during the pre-strike (1975-75) year as well.

* Significant beyond the .001 level.

TABLE I-7a

NUMERICAL AND PERCENTAGE DISTRIBUTIONS OF SECONDARY SCHOOL WITHDRAWALS (WITHIN SCHOOL DROPOUTS) IN RELATION TO PRE- AND POST-STRIKE MONTHS FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-7[illegible]) YEARS

School Board Number	Withdrawal	Pre-Strike Months (before Dec.)		December		Post-Strike Months (after Dec.)		Total	Chi Square[1] df=2
		N	%	N	%	N	%	N	
1	Pre-Strike	170	42.1	29	7.2	205	50.7	404	14.84***
	Strike	232	36.4	6	.9	399	62.7	637	
	Post-Strike	427	43.5	58	5.9	496	50.6	981	
2	Pre-Strike	598	44.0	122	9.0	639	47.0	1359	142.24***
	Strike	429	26.6	15	.9	1167	72.5	1611	
	Post-Strike	570	36.6	122	7.9	861	55.5	1553	
3	Pre-Strike	572	33.6	161	9.5	967	56.9	1700	114.32***
	Strike	447	21.7	15	.7	1591	77.6	2053	
	Post-Strike	585	31.6	148	8.0	1124	60.4	1857	
4	Pre-Strike	993	37.8	158	6.0	1471	56.2	2622	63.26***
	Strike	1337	37.2	24	.7	2230	62.1	3591	
	Post-strike	1771	44.3	181	4.5	2043	51.2	3995	
5	Pre-Strike	2324	47.8	269	5.5	2268	46.7	4861	95.13***
	Strike	3970	50.9	-	-	3836	49.1	7806	
	Post-Strike	4208	55.2	361	4.7	3053	40.1	7622	
6	Pre-Strike	144	38.9	38	10.3	188	50.8	370	42.99***
	Strike	197	24.8	10	1.3	586	73.9	793	
	Post-Strike	288	34.3	57	6.8	494	58.9	839	

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[1] In computing the chi square values withdrawals reported for the month of December were not taken into account.

***Significant beyond the .001 level.

TABLE I-7b

NUMERICAL AND PERCENTAGE DISTRIBUTION OF SECONDARY SCHOOL WITHDRAWALS (WITHIN SCHOOL DROPOUTS) IN RELATION TO PRE- AND POST-STRIKE MONTHS FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-77) YEARS

School Board Number	Year of Withdrawal	Pre-Strike Months (Sept. to Jan.)		Strike Months (Feb. to March)		Post-Strike Months (April to June)		Total	Chi Square df=4
		N	%	N	%	N	%	N	
1	Pre-Strike	41	46.6	26	29.5	21	23.9	88	36.01***
	Strike	32	22.1	2	1.4	111	76.5	145	
	Post-Strike	26	29.2	28	31.4	45	39.4	89	
2	Pre-Strike	455	60.2	146	19.3	155	20.5	756	52.44***
	Strike	339	42.0	217	26.8	252	31.2	808	
	Post-Strike	386	56.9	159	23.4	134	19.7	679	

TABLE I-7c

NUMERICAL AND PERCENTAGE DISTRIBUTION OF SECONDARY SCHOOL WITHDRAWALS (WITHIN SCHOOL DROPOUTS) IN RELATION TO PRE- AND POST-STRIKE MONTHS FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-77) YEARS

School Board Number	Year of Withdrawal	Pre-Strike Months (Sept. to Mar.)		Strike Month April		Post-Strike Months (May & June)		Total	Chi Square df=2
		N	%	N	%	N	%	N	
1	Pre-Strike	362	76.7	46	9.7	64	13.6	472	86.20***
	Strike	845	69.7	11	.9	356	29.4	1212	
	Post-Strike	1140	77.4	121	8.2	211	14.4	1472	

TABLE I-7d

NUMERICAL AND PERCENTAGE DISTRIBUTION OF SECONDARY SCHOOL WITHDRAWALS (WITHIN SCHOOL DROPOUTS) IN RELATION TO PRE- AND POST-STRIKE MONTHS FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-77) YEARS

School Board Number	Year of Withdrawal	Pre-Strike Months (Sept. to Dec.)		Strike Months Jan. & Feb.		Post-Strike Months (March to June)		Total	Chi Square df=4
		N	%	N	%	N	%	N	
1	Pre-Strike	134	55.9	43	17.9	63	26.2	240	27.69***
	Strike	129	32.7	112	28.4	153	38.9	394	
	Post-Strike	134	52.0	46	17.8	78	30.2	258	

***Significant beyond the .001 level.

TABLE I-8

SCHOOL BOARDS AFFECTED BY TEACHERS' STRIKE COMPARED WITH ONTARIO TOTAL ON PERCENTAGE DISTRIBUTION OF SECONDARY SCHOOL WITHDRAWALS (WITHIN YEAR DROPOUTS) BY GRADE AND SEX FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-77) YEARS

School Board Number	Year of Withdrawal	Grade 9 M %	Grade 9 F %	Grade 10 M %	Grade 10 F %	Grade 11 M %	Grade 11 F %	Grade 12 M %	Grade 12 F %	Grade 13 M %	Grade 13 F %	Total M %	Total F %	Total N	Chi Square $df=4$
01	Pre-Strike	47.6	52.4	60.0	40.0	51.6	48.4	83.3	16.7	40.0	60.0	54.2	45.8	83	3.18
	Strike	79.2	20.8	52.5	47.5	63.0	37.0	78.6	21.4	50.0	50.0	63.6	36.4	140	6.64
	Post-Strike	87.5	12.5	62.5	37.5	50.0	50.0	57.1	42.9	37.5	62.5	58.0	42.0	86	5.18
02	Pre-Strike	53.3	46.7	64.9	35.1	61.3	38.7	58.1	41.9	52.9	47.1	59.1	40.9	379	3.34
	Strike	46.3	53.7	50.0	50.0	45.6	54.4	49.5	50.5	54.3	45.7	49.4	50.6	633	2.65
	Post-Strike	60.9	39.1	41.8	58.2	54.8	45.2	56.1	43.9	61.4	38.6	54.0	46.0	739	17.57**
03	Pre-Strike	69.9	30.1	58.6	41.4	52.8	47.2	58.5	41.5	56.8	43.2	57.9	42.1	1,298	15.07**
	Strike	54.7	45.3	60.2	39.8	56.9	43.1	57.6	42.4	65.7	34.3	59.1	40.9	1,552	6.33
	Post-Strike	59.8	40.2	58.8	41.2	59.3	40.7	55.1	44.9	67.0	33.0	59.6	40.4	1,515	9.50*
04	Pre-Strike	67.4	32.6	58.0	42.0	42.9	57.1	48.6	51.4	40.0	60.0	52.6	47.4	215	9.95*
	Strike	57.3	42.7	54.1	45.9	53.7	46.3	56.3	43.8	54.3	45.7	55.0	45.0	376	.31
	Post-Strike	57.1	42.9	51.3	48.7	57.1	42.9	59.5	40.5	46.7	53.3	54.5	45.5	257	1.78
05	Pre-Strike	62.2	37.8	56.2	43.8	58.0	42.0	67.9	32.1	63.5	36.5	60.0	40.0	1700	12.[illegible]*
	Strike	59.8	40.2	59.8	40.2	59.3	41.7	65.2	34.8	65.4	34.6	61.1	38.9	2053	6.93
	Post-Strike	68.6	31.4	59.3	40.7	65.3	34.7	62.3	37.7	62.5	37.5	62.9	37.1	1851	[illegible].07
06	Pre-Strike	58.7	41.3	57.4	42.6	56.4	43.6	54.7	45.3	63.6	36.4	57.3	42.7	751	4.35
	Strike	47.8	52.2	47.8	52.2	53.2	46.8	53.0	47.0	52.3	47.7	51.4	48.6	77[illegible]	1.72
	Post-Strike	64.3	35.7	48.0	52.0	52.7	47.3	50.6	49.4	70.6	29.4	55.5	44.5	66[illegible]	[illegible]**
07	Pre-Strike	57.8	42.2	55.5	44.5	61.3	38.7	59.8	40.2	60.6	39.4	59.1	40.9	2627	4.88
	Strike	56.5	43.5	59.6	40.4	55.6	44.4	52.8	47.2	58.3	41.7	56.5	43.5	3501	7.69
	Post-Strike	58.9	41.1	53.3	46.7	58.2	41.8	55.4	44.6	60.8	39.2	58.0	42.0	3967	6.03
08	Pre-Strike	54.6	45.4	55.4	44.6	52.2	47.8	53.7	46.3	60.7	39.3	54.7	45.3	4,074	[illegible].28*
	Strike	55.5	44.0	53.5	46.5	51.8	48.2	54.1	45.9	62.0	38.0	55.0	45.0	6,925	29.46***
	Post-Strike	51.6	48.4	53.7	46.3	51.2	46.8	57.1	42.9	58.5	41.5	53.9	46.1	6,342	20.56***
*09[1]	Pre-Strike	71.8	28.2	62.8	37.2	55.7	44.3	59.2	40.8	53.8	46.2	61.8	38.2	46[illegible]	7.53
	Strike	56.0	44.0	53.9	46.1	55.1	44.9	55.2	44.8	65.5	34.5	56.0	44.0	1,187	8.26
	Post-Strike	58.3	41.7	54.3	45.7	[illegible]	46.2	58.4	41.6	63.4	36.6	56.8	43.2	1,392	4.60
10	Pre-Strike	65.9	34.1	56.1	43.9	56.8	43.2	62.9	37.1	72.2	27.8	62.0	38.0	355	5.78
	Strike	53.4	46.6	61.8	38.2	68.1	31.9	55.4	44.6	66.4	33.6	61.1	38.9	763	14.27**
	Post-Strike	63.0	37.0	54.3	45.7	57.7	42.3	56.4	43.6	51.5	48.5	57.0	43.0	756	4.77
School Boards Combined	Pre-Strike	58.6	41.4	56.8	43.2	55.5	44.5	58.1	41.9	60.4	39.6	57.5	42.5	11,921	14.63**
	Strike	55.7	44.3	56.1	43.9	54.8	45.2	55.3	44.7	61.0	39.0	56.4	43.6	17,994	34.92***
	Post-Strike	56.8	43.2	54.7	45.3	55.8	44.2	56.6	43.4	60.6	39.4	56.7	43.3	17,[illegible]42	

[1] This school board was affected by the teachers' strike during the pre-strike (1974-75) year as well.

* Significant at the .05 level.
** Significant at the .01 level.
*** Significant at the .001 level.

TABLE I-9

PERCENTAGE DISTRIBUTION OF SECONDARY SCHOOL WITHDRAWALS (WITHIN YEAR DROPOUTS) BY MONTH OF WITHDRAWAL AND SEX FOR THE PRE-STRIKE (1974-75), STRIKE (1975-76) AND POST-STRIKE (1976-1977) YEARS

School Board	Year of Withdrawal	Month of Withdrawal Sept. M %	Sept. F %	Oct. M %	Oct. F %	Nov. M %	Nov. F %	Dec. M %	Dec. F %	Jan. M %	Jan. F %	Feb. M %	Feb. F %	March M %	March F %	April M %	April F %	May & June M %	May & June F %	Total M %	Total F %	N	Chi square df=7
01	Pre-Strike	71.4	28.6	47.4	52.6	57.1	42.9	-	-	57.1	42.9	42.9	57.1	52.6	47.4	60.0	40.0	50.0	50.0	53.4	46.6	88	1.43
	Strike	-	100.0	64.3	35.7	57.1	42.9	-	100.0	28.6	71.4	-	100.0	100.0	-	68.5	31.5	63.2	36.8	66.7	33.3	145	10.82
	Post-Strike	-	-	41.2	58.8	60.0	40.0	100.0	-	33.3	66.7	70.6	29.4	50.0	50.0	64.3	35.7	61.9	38.1	58.0	42.0	88	4.62
02	Pre-Strike	50.0	50.0	53.1	46.9	62.3	37.7	55.2	44.8	60.7	39.3	64.3	35.7	73.2	26.8	57.6	42.4	66.7	33.3	60.1	39.9	398	7.00
	Strike	32.1	67.9	46.2	53.8	53.5	46.5	-	100.0	50.0	50.0	47.5	52.5	45.4	54.6	62.3	37.7	54.0	46.0	49.3	50.7	635	14.94 *
	Post-Strike	56.7	43.3	53.3	46.7	43.1	56.9	50.0	50.0	54.3	43.7	45.9	54.1	58.9	41.1	61.9	35.1	52.7	47.3	63.0	37.0	981	12.45
03	Pre-Strike	52.7	47.3	58.2	41.8	58.5	41.5	57.4	42.6	57.6	42.4	59.0	41.0	51.9	48.1	59.4	40.6	60.6	39.4	57.8	42.2	1,331	1.86
	Strike	53.2	46.8	61.0	39.0	61.7	38.3	46.7	53.3	56.9	43.1	62.3	37.7	53.1	46.9	61.2	38.8	64.7	35.3	59.4	40.6	1,607	7.60
	Post-Strike	60.0	40.0	65.6	34.4	54.6	45.4	62.8	37.2	55.5	44.5	59.9	40.1	54.5	45.5	60.8	39.2	64.6	35.4	52.9	47.1	1,544	9.31
04	Pre-Strike	-	-	57.7	42.3	47.6	52.4	40.0	60.0	68.2	31.8	66.7	33.3	36.8	63.2	47.6	52.4	47.8	52.2	52.7	47.7	239	8.57
	Strike	-	-	56.0	44.0	47.2	52.8	66.7	33.3	42.4	57.6	45.3	54.7	70.3	29.7	52.9	47.1	59.7	44.3	55.1	44.9	394	14.47*
	Post-Strike	-	-	49.2	50.8	53.5	46.5	46.9	53.1	62.1	37.9	58.8	41.2	33.3	66.7	66.7	33.3	68.6	31.4	54.5	45.5	257	10.09
05	Pre-Strike	-	-	62.8	37.2	57.8	42.2	57.8	42.2	65.4	34.6	61.5	38.5	56.3	43.7	56.8	43.2	59.2	40.8	45.5	54.5	1,093	7.29
	Strike	-	-	63.3	36.7	56.7	43.3	60.0	40.0	57.4	42.6	59.7	40.3	62.2	37.8	64.6	35.4	60.1	39.9	69.0	31.0	2,050	5.84
	Post-Strike	-	-	62.5	37.5	65.1	34.9	60.1	39.9	63.3	36.7	54.2	45.8	65.7	34.3	62.0	38.0	68.7	31.3	62.9	37.1	1,951	12.04
06	Pre-Strike	56.2	43.8	57.1	42.9	58.3	41.7	43.2	56.8	22.7	77.3	54.5	45.5	56.5	43.5	64.4	43.5	66.7	33.3	56.8	43.2	753	18.63 **
	Strike	-	100.0	53.3	46.7	49.2	50.8	35.7	64.3	39.3	60.7	50.4	49.6	51.5	48.5	60.3	39.7	59.7	40.3	51.4	48.6	774	17.17 *
	Post-Strike	53.8	46.2	57.8	42.2	49.2	50.8	60.5	39.5	50.8	49.2	45.8	54.2	68.4	31.6	63.9	36.1	59.7	40.3	56.0	44.0	679	13.90
07	Pre-Strike	50.0	50.0	61.6	38.4	60.8	39.2	69.6	30.4	55.0	45.0	62.1	37.9	49.7	50.3	66.4	33.6	63.4	36.6	59.1	40.9	2,627	24.70***
	Strike	52.8	47.2	61.3	38.7	65.0	35.0	50.0	50.0	49.6	50.4	55.6	44.4	58.4	41.6	61.1	38.9	66.7	33.3	56.5	43.5	3,501	33.26***
	Post-Strike	55.6	44.4	62.3	37.7	55.4	44.4	56.7	43.3	57.9	42.1	55.8	44.2	55.3	44.7	62.8	37.2	65.2	34.8	58.0	42.0	3,992	14.58*
08	Pre-Strike	51.9	48.1	56.8	43.2	58.9	41.1	61.2	38.8	52.2	47.8	62.7	37.3	61.0	39.0	59.9	41.1	59.8	40.2	56.9	43.1	4,842	28.91***
	Strike	52.3	47.7	56.5	43.5	56.5	43.5	-	-	50.4	49.6	55.6	44.6	59.3	40.7	64.1	35.9	63.2	36.8	56.1	43.9	7,805	50.42***
	Post-Strike	51.6	48.4	53.7	46.3	55.7	44.3	56.5	43.5	58.0	42.0	59.3	40.7	59.2	40.8	61.6	38.4	62.3	37.7	55.9	44.1	7,622	44.54***
09[1]	Pre-Strike	53.7	46.3	62.5	37.5	56.7	33.3	100.0	-	55.0	45.0	59.5	40.5	64.3	35.7	54.3	45.7	70.4	29.6	61.9	38.1	472	11.12
	Strike	53.6	46.4	52.8	47.2	66.7	33.3	58.2	41.8	54.5	45.5	56.1	43.9	54.5	45.5	54.5	45.5	57.0	43.0	56.6	43.4	1,212	7.10
	Post-Strike	53.5	46.5	66.2	33.8	63.7	36.3	49.4	50.6	56.6	43.4	56.7	43.3	59.5	40.5	57.9	42.1	56.9	43.1	57.5	42.4	1,470	5.04
10	Pre-Strike	83.3	16.7	65.8	34.2	61.7	38.3	67.6	32.4	60.0	40.0	56.0	44.0	62.9	37.1	63.6	36.4	59.3	40.7	62.0	38.0	355	2.86
	Strike	56.5	43.5	69.2	30.8	61.1	38.9	50.0	50.0	51.8	48.2	63.1	36.9	67.2	32.8	59.6	40.4	59.4	40.6	61.1	38.9	771	11.45
	Post-Strike	55.6	44.4	55.9	44.1	51.5	48.5	42.9	57.1	53.6	46.4	55.2	44.8	63.6	36.4	66.1	33.9	67.8	32.2	57.2	42.8	817	15.18*
School Boards Combined	Pre-Strike	52.4	47.6	59.4	40.6	59.3	40.7	60.5	39.5	55.7	44.3	61.1	38.9	56.9	43.1	60.0	40.0	59.3	40.7	58.2	41.8	12,805	20.82**
	Strike	52.3	47.7	58.4	41.6	58.4	41.6	51.3	48.7	51.9	48.1	56.4	43.6	58.6	41.4	62.8	37.2	62.0	38.0	56.9	43.1	18,987	92.22***
	Post-Strike	53.2	46.8	57.7	42.3	56.2	43.8	55.9	44.1	57.7	42.3	56.3	43.7	59.6	40.4	61.8	38.2	63.0	37.0	57.3	42.7	19,301	61.60***

[1] This school board was affected by the teachers' strike during the pre-strike year (1974-75) as well.

* Significant at the .05 level.
** Significant at the .01 level.
*** Significant at the .001 level.

CHAPTER 2

EFFECTS ON DROPOUTS' MOTIVATIONS, DESTINATIONS, PLANS, ETC.

SAMPLE

OISE's studies of dropouts, which have been going on since 1972, have shown that not only do the loss rates vary from board to board, school to school, grade to grade, etc., but also that there is wide variance in the reasons why youth leave their school programs before completion, their destinations, plans, etc. Any disruption of school activity seems to affect adversely certain students' commitment to schooling. An unusual disruption, such as a teachers' strike, might be expected to affect certain students more than others and certain dropouts differently from others. One way of examining the latter, we felt, was to continue the practice (adopted in the earlier OISE dropout studies) of interviewing a sample of dropouts. Interview samples for the pre-strike years were not available for four of the ten strike boards (the ones which did not participate in the 1974/75 study--systems #01, 02, 04 and 10). We did carry out a few interviews of their 1974-75 losses but the response was poor because of the difficulty of trying to trace the students. So we decided to use as our sample only the six boards for which we have data covering 1974-75, 1975-76 and 1976-77.

Initially 10% of the names were selected for interviewing from the monthly dropout lists submitted by the six boards. The lists covered dropouts of the strike year and post-strike year. Sampling was based upon a stratified random technique using sex and grade level as the criteria of stratification. The pre-strike interview samples for these boards consist of the interviews of their dropouts which were done for the Ministry dropout study of 1974-75.[5] The responses of the total sample of interviews in that study representing responses of a sample of dropouts from 26 boards are also referred to.

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[5] Which is reported in the Watson and McElroy Ministry of Education's Dropout Study of 1974/75 referred to elsewhere in this report and the abridged version, *Focus on Dropouts* by Cicely Watson.

The dropout chosen was phoned at least three times and when no contact was made the interviewer simply moved on to another name on the list. We ended up with a sample for our six boards of 3.6% and 3.2% for strike and post-strike years respectively but only 1.3% for the pre-strike year, although the total dropout interviews for that year's study exceeded 3%--see Table II-1.

The interview samples for the three years are compared with the corresponding parent populations by sex in Table II-1 and by grade in Table II-2 to check the representativeness of the samples in terms of these two variables. The three samples were found to be representative of the parent populations in terms of sex ratio (as indicated by n.s.s. chi squares), but only the pre-strike year sample was representative of the population of these boards in terms of grade level. The samples for the strike and post-strike years were significantly different ($\rho \leq .001$) from the grade level distributions of the parent populations. In both of these samples, Grade 13 is over-represented and Grade 9 under-represented.[6] Therefore the reader should keep in mind that the over-representation of Grade 13 dropout opinion and under-representation of Grade 9 opinion when we discuss the overall account of the evidence derived from the dropout interviews, is appropriate for this sample in the strike and post-strike years.

Collection of data

For this Strike Study the interview schedule used in the 1974/75 dropout study was modified by the addition of a number of questions about effect of the teachers' strike. Copies of both schedules are included in the appendix and the additional questions are denoted by an *x*. In the interviews for all years the family background section was intended to provide socio-economic and educational status information about the parents and siblings of the dropout. The questions are asked at the end of the interview because by that time rapport has been established between the interviewer and interviewee and the latter is more likely to cooperate in providing this type of information which otherwise might be considered an invasion of privacy. The same interviewing instructions were followed as had previously been used. At the beginning of the interview, the interviewer identified himself/herself and the study, and asked for agreement to be interviewed. The interviewee was then told that he/she might refuse to answer any question and the interviewer would simply go on to the next one. The interviewee was assured of anonymity, that the interview schedules would be destroyed after the responses were transferred to computer tape and that any reports written would identify cohorts of dropouts by code numbers for boards and schools and no individual identification would be possible. Before the family background section the interviewer explained its purpose. It was needed in order to fit the dropout's replies into a framework as to the type and status of family the dropout came from. It was not our intention to snoop into the specifics of their family's income or personal relations. Interviewers were instructed to read the question and note the dropout's actual words if there was any ambiguity as to the category of the response. More than one response should be noted if several were given and where they seemed conflicting, the question should be asked, "Which of these do you think was your main reason (plan, attitude, etc.)?"

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[6] But it should be noted that the dropouts from Grade 13 are also over-represented in these years (i.e., the dropout rate of that grade rose).

Statistical analysis

The responses were analyzed in terms of numerical and percentage distributions by the following variables:

Sex
Grade level

for each of the three years separately. An attempt was made to ascertain the variation among the distribution patterns of the various groups determined by these variables. Chi square technique (or other appropriate tests of significance) was applied to determine the significance of the variation introduced by these factors. The interview findings have been reported in this chapter in seven sections. The first deals with the dropout's family background in an effort to look at the question: Did the strike disproportionately affect (by increasing their representation as dropouts) the youths of certain family type or status? Since no dramatic change would take place in the school clientele of a community in so short a period as three years, if there were no strike effect then random samples of dropouts in these three years should show considerable similarity of distribution by family type variables.

The second section reports the reasons for leaving school (as reported by the dropout) in order to address two questions: Did the strike loom as an important reason for leaving school in the strike year and the year following? Was there a shift in the strike year in the distribution of the reasons offered and did the pre-strike distribution pattern re-establish itself the following year? The dropout studies of 1972/73, 73/74 and 74/75 had shown considerable consistency of response on the reasons given by the dropouts for their failure to complete the school year. The main motivation was economic. Was this true of 1975/76, the strike year?

The third section discusses the dropouts' destinations (the replies to the question, "What are you doing now?") considering whether, in the strike year, the dropouts' distribution by destination shows a different pattern from that established in the three early studies and, if so, whether the old pattern had returned by 1976/77. Particularly we wanted to know whether more dropouts of the strike year returned to high school. If that proved to be the case it would suggest that any adverse effect caused by the strike had been short-lived.

The fourth and fifth sections discuss parents' and school personnel influence/non-influence on the dropout decision. Earlier dropout studies established that most dropouts discuss their intention to leave school with their parents before they take that step. Also a sizeable minority of parents leave the decision about dropping out to their offspring and some actually encourage them to drop out. These studies established that peer group influence and school influence (in the form of prior consultation with school personnel) was slight. Did this change in the strike year? Was there more or less school consultation? Was there more or less perception of the teachers' concern that the students stay in school? Since the schools were closed for several weeks, we would expect to find students perceiving less teacher concern and reporting less consultation with school personnel.

The sixth section of this chapter deals with the interview findings on dropouts' plans. Did the distribution of their plans shift in the strike year? In the earlier studies there was a complementarity between the dropout's destination (current main activity) and his first plan. The largest group was working, their chief plan was to keep the job or get a better one and to study part-time. Was there an increase in the percentage of the dropouts planning to return to school? Or planning to engage in further education, part-time?

The final section reports the dropouts' opinions about the strike--their responses to the additional four questions which were added to the interview schedules of 1975/76 and 1976/77.

SECTION 1 FAMILY BACKGROUND

Family background was analyzed using the following variables:

	Table
Ethnic background (parents' country of birth)	II-3
Educational level (each parent's highest completed grade of schooling)	II-4
Occupational level	
parent's employment status	II-5
type(s) of occupation	II-6
non-working parents' source of income or reason for not working	II-7 and II-8
Family size (number of siblings)	II-9
Sibling influence (prior dropouts)	II-10
Economic position (annual income of family)	II-11

The analyses of these data were focussed to determine two things: (1) Was there a variation in background characteristics which might itself be responsible for a difference in the response pattern of the pre-strike, strike and post-strike dropout samples on some selected variables (e.g., reason for leaving school, destination, plans to leave school discussed or not discussed with parents, etc.)? If such variation occurred, was there any evidence to show whether it was attributable to the interruption caused by teachers' strike or independent of it?

Parents' country of birth

Is there any significant difference among the three groups (determined by year of withdrawal) of interviewees with respect to their parents' country of birth?

Canadian parents were predominant in this sample for each of the three years under study, as they were in the 1974/75 dropout study, most of whose participating boards have never experienced a teachers' strike. The one noticeable change was the proportion of dropouts having parents born in non-European countries.

To take care of the problem of small numbers, for purposes of computing X^2 values all the non-Canadian English-speaking countries were grouped into one category and France and Germany were combined. There was no statistically significant difference over these three years, with respect to parents' country of birth.

Educational level of parents

The variation noted in the educational level of the dropouts' parents over these three years is noteworthy. Two changes among the fathers and one for the mothers are worth mentioning. Fathers with upper elementary school education (Grades 7 or 8) dropped in the strike year to 12.2% of the sample from 22.7% the year before, and those with three or four years of university (i.e., a first degree) dropped to 6.8% from 10.1%. Mothers with senior secondary school honours graduation (Grade 13) in the strike year rose to 10.6% from 5.4%. For purposes of the chi square test the categories were grouped into three--elementary which includes no formal schooling and elementary up to Grade 8 completion; secondary which includes Grades 9-13; and post-secondary. Fathers with elementary education (29.4%) were underrepresented in the strike year. The corresponding percentages for the pre- and post-strike years were 40.5 and 36.5 respectively and somewhat overrepresented in the secondary (53.9%) and post-secondary (16.7%) education categories. The observed variation was highly significant ($X^2 = 21.75$, d.f. = 4, $\rho \leq .001$). The pattern of response distribution for mothers was different; those with elementary education were most predominant in the post-strike year (30.6%) whereas mothers with secondary level of education were most predominant in the strike year (70.2%). The observed variation was significant beyond the .001 level ($X^2 = 65.04$, d.f. = 4).

Parents' employment status

Parents were defined as either working or not working. Although the proportions of fathers and mothers who are working have risen, the change over these three years is not statistically significant.

Parents' type of occupation

For chi square purposes, to comply with the requirement for minimum expected value of 5, the clerical and sales categories and the labourer, primary worker and unclassified categories were combined for the fathers' occupations, and all categories below the recreation and service occupations were combined for the mothers. The occupational distributions over the three years were significantly different ($\rho \leq .02$) with respect to the fathers' occupations. In the strike year sample, the highest category (Managerial, Professional) was over-represented and the "Craftsman, Factory" category under-represented. This was not what we expected to find. If we assume that dropping out is a hazard to which the "marginal" student is more vulnerable than other students, we would argue that any disruption of school service would increase his probability of leaving. Since school participation is positively related to parental economic status we would not have expected a substantial increase to occur in the proportion of dropouts in 1975/76 having fathers of the highest occupational rating. No statistically significant change took place, over the three years, in the dropouts' mothers' occupations. There was a drop in the proportion whose mothers worked in sales jobs, from the pre-strike to the strike year, and a rise in those employed in craftsman or factory production jobs, but not of sufficient dimension to be statistically significant.

Non-working parents' income source

For parents who were not working we asked the source of their income. Interviewees whose fathers were living on pensions or unemployment insurance were over-represented, more than doubling in the strike year sample over that of the previous year. Those receiving unemployment pay also rose while those with fathers on welfare disappeared (i.e., there were none). There were no mothers on welfare in the pre-strike year sample but their proportion grew steadily in the next two years. However, chi square values were not computed because of the small numbers involved.

Reason for parents not working

This question was applicable to those whose parents were not working (excluding those with some regular source of income, e.g., pension, unemployment insurance and welfare). But (a) the number of dropouts with non-working fathers who gave a reason for the lack of income was too small for making meaningful analysis and (b) most of the non-employed mothers are housewives. However, it should be noted that the percentage of interviewees with mothers not gainfully employed was lowest in the strike year (80%). The different proportions over the three years demonstrate a statistically significant shift in the distribution of the reason for mothers not working ($p \leq .05$).

Number of siblings

Sibling example (siblings who have dropped out of school)

The three groups, defined in terms of year of withdrawal, were not significantly different on these variables.

Family's annual income

The distribution of interviewees by family income is quite different in this sample from that of the big provincial 1974/75 sample (1974/75: under $8400 about 21% *vs.* 8%, 10% 19%; $8400-$12,000 about 28% *vs.* 21%, 22%, 27%; $12,000 and over, 51% *vs.* 71%, 68%, 54%). In this smaller sample in the pre-strike years the highest income families are over-represented. However, this reduces steadily in the sample of the strike and post-strike years. If we had fuller pre-strike figures (i.e., interviews from all 10 boards) we might find that our 1974/75 distribution more closely approximated that of the provincial sample of 1974/75--in which case no significant change would have occurred in the growth of this income group over the three sample years. Furthermore, the inconsistency in the distribution pattern could be due to the unreliable nature of the family income data. Other studies of parents' s.e.s. have shown that exact information about family income is not always known to children. However, on the basis of this sample alone we would have to report that the observed variation in the distribution pattern over the three years was significant beyond the .01 level ($X^2 = 31.74$, d.f. = 12, $p \leq .01$).

IN SUMMARY

On the basis of interview samples from six of the ten strike boards, over three years, and using as indicative of general response the 1974/75 interview responses (which represent a 3% overall sample drawn from the dropouts of 26 boards) we find the following:

- There was no significant change in the strike year in the parents' country of origin, employment/non-employment status, mothers' occupational status, family size and experience of sibling dropouts.
- There was a significant change in the strike year in the fathers' occupational status--an increase in the proportion from the highest group (professional and managerial): 1974/75, 20 boards, 25.1%, pre-strike year, 28.0, strike year, 40.1 and post-strike year, 29.3. This provides some evidence that more dropping out occurred in the strike year of children of high occupational status fathers. This would be congruent with the finding that the strike year seems to have disproportionately affected Grade 13 and the students whose fathers had attained a comparatively high level of education.
- There was a significant change in the strike year in the father's level of education--the proportion of students whose fathers had at least one year of secondary or post-secondary education increased disproportionately in the strike year.
- The proportion of students whose mothers had at least one year of education beyond the secondary level also increased over the three years of study. However, the proportion of students having mothers with a minimum of one year of secondary education decreased disproportionately in the strike year.
- There was a significant change in the distribution by family income--

a decrease in the strike and post-strike years of the higher income group, which seems to counteract the other significant finding.

- There is some evidence of a shift in the sources of income of the non-working parents and their reasons for not working, but the numbers are too small to subject them to statistical analysis or place much faith in their evidence.
- Our general conclusion, then is that the family characteristics of the interview samples did not change sufficiently over these years to account for the significant change(s) we might report in the dropouts' reasons for leaving school, plans, etc. There is some evidence that, in the interviewed dropouts of the strike year, there was an over-representation of the opinion of Grade 13 dropouts and dropouts having fathers with the highest level of education and occupational status. The pre-strike year strike sample of interviews is really not satisfactory. Although in 1974/75 the interview sample was generally acceptable the numbers coming from our six boards were much smaller than desirable and four of the boards of our strike sample are not represented. Nevertheless, in terms of the general distribution of the responses our conclusion stands.

TABLE

Variable under Comparison	Pre-Strike (1974/75)		Strike (1975/76)	Post-Strike (1976/77)
	Ont. Sample %	Study Sample %	Study Sample %	Study Sample %
Grade 13 dropout rate	12.7	13.3	21.9	23.1
Fathers in the highest occupational categories	25.1	28.0	40.1	29.3
Fathers with at least one year of secondary level of education	48.3	45.3	53.9	49.5
Fathers with at least one year of post-secondary education	9.6	14.2	16.7	14.0
Annual family income	36.8	71.1	68.2	53.6

SECTION 2 FIRST REASONS FOR LEAVING SCHOOL

In the three earlier dropout studies, in a mailed questionnaire having suggested reasons why the dropouts might have left school and provided room for a written-in response, we reviewed the reason in the interview. Sometimes additional collateral or related reasons were given or more detail was provided. In the 1975/76 and 1976/77 interviews, since the students had not completed prior questionnaires, the interviewer spent more time trying to get a complete list of the reasons lying behind their decisions. Most respondents gave only one or two reasons for leaving school, so for analysis by sex, grade and board we have concentrated on these. In these two years a separate question after the reason for leaving question specifically asked if the strike had been a factor in the dropout decision. If the student had already reported the strike as one of his reasons this question was omitted. If, however, he had not mentioned it the interviewer took him back over the reasons so that the relationship of the "strike reason" to the other reason(s) was made clear. In all cases where more than one reason was given the interviewer ended the question by asking, "Now what was the *chief* or *main* reason?"

The four top reasons for leaving school during each of the three years under study are listed below:

		%
• Pre-strike year	- employment	42.4
	- dissatisfaction with school	28.3
	- financial	19.0
	- low achievement	5.8
• Strike year	- teachers' strike	24.6
	- dissatisfaction with school	19.3
	- employment	17.0
	- low achievement	11.6

		%
• Post-strike year	- dissatisfaction with school	23.6
	- employment	17.0
	- teachers' strike	11.8
	- low achievement	11.4

For these four major reasons, the rank order of importance of the reasons changed from the pre-strike to the post-strike years. The rank of "low achievement" remained the same, but its relative proportions increased considerably. Employment was the most common first reason for leaving school in the pre-strike year, and in this response this sample agrees with the dropout interview sample of 1974/75 and the questionnaire samples of 1972/73, 1973/74 and 1974/75. Second place in the pre-strike year went to one of the reasons indicating dissatisfaction with school. In 1975/76 the teachers' strike was the most common first reason given for leaving school (24.6%), followed by dissatisfaction with school (19.3%). Employment, as third, dropped from 42% to 17%. In the post-strike year the strike was still appearing as a prime cause for leaving school (a year later). It was third in importance (almost 12% gave it as the main reason) and "dissatisfaction with school" had changed places with "employment". The reduction in importance of the employment and financial motivation for leaving school accords with our sample analysis showing that the only statistically significant difference in family characteristics over these three years was a greater proportion of high occupational status fathers and a smaller proportion of higher income families. Table II-12 shows the percentage distribution and rank ordering of the first reasons for each of the three years.

Grouping the responses into four categories--economic related, school related, personal and other, and strike--the chi square technique was applied to test the significance of the observed variation in the distribution pattern for the three years. The two modes of classification, i.e., the principal reason for leaving school and year of withdrawal were significantly related beyond the .001 level (X^2 = 111.84, d.f. = 6).

- The economic reasons decreased in importance.
- The school related reasons (other than strike) gained in importance after the strike year but did not return to the high importance of the pre-strike year.
- The personal reasons grew from 6.5% in the pre-strike to 15.3% and 17.9% in the next two years.
- The teachers' strike which was the most important single reason in the strike year (24.6%) ranked second in importance only to the combined school related reasons (35%) that year. It was still fairly commonly given as the prime reason in the year following the strike.

First reason by school board and year of withdrawal

The distribution of the reasons given for leaving school differed markedly for the different school boards, and for most boards the distribution pattern of the board also changed from the pre-strike to the post-strike year. "Employment", "dissatisfaction with school" and "low achievement" shifted their rank order considerably for most of the school boards. During the strike year school boards 01 (35.7%); 03 (39%); 04 (63.6%); 08 (30.2%) and 10 (33.3%) were over-represented among those whose dropouts listed the strike as the main reason for leaving school (the "norm" was 24.5%, see Table II-13).

First reason for leaving school in relation to sex

The reasons for leaving school were analyzed for each sex separately for each year. The tabulations are given in Table II-14, the rank orderings in Table II-15. For the pre-strike year "employment" was the most common first reason for male respondents and the second for female students. For the girls "dissatisfaction with school" was the most common first reason for leaving school. "Dissatisfaction with peers or peer group influence" was not given as a reason listed separately during the pre-strike year although one or two cases of "written in" complaints were included in the "other" category. For the pre-strike year the observed variation in the distribution pattern of males and females was significant beyond the .05 level ($X^2 = 10.30$, d.f. = 3, $\rho \leq .05$).

During the strike year, "teachers' strike" was the common first reason for leaving school given by males (26.9%) and females (21.7%). "Employment" (19.7%) and "dissatisfaction with school" (19.5%) ranked next in descending order. The corresponding percentages for females were 13.3% and 19.6% (2nd rank). Third in importance for females was the group of reasons of a personal nature (marriage, travel, other, 13.7%). In the strike year, the variation in the distribution of response pattern for males and females was significant beyond the .001 level ($X^2 = 16.82$, d.f. = 3, $\rho \leq .001$).

For the post-strike year, "dissatisfaction with school" ranked as highest in importance both for male (25.6%) and female (21.3%) respondents. This was followed by "employment" (male: 18.1%, female: 20.1%) and "low achievement" for the males (13.8%) and "health/medical" (11.4%) for the females. The observed variation in the distribution pattern of the two sexes was not statistically significant ($X^2 = 3.04$, d.f. = 3, n.s.s.).

During the pre-strike year, almost two-thirds of the male interviewees had left school because of economic reasons. School related reasons were more commonly given by females (49.2%) than males (33.4%). The relative importance of reasons, for both sexes, showed considerable change during the strike year. For the males the economic reasons lost importance and school related reasons gained importance--particularly if we consider the teachers' strike (26.9%) as a school related reason. For the females both the economic and school related reasons--apart from the teachers' strike--were reduced in importance, and the incidence of personal reasons rose from 9.6% to 25.8%.

For the post-strike year, economic reasons continued to have reduced importance for the males and the school related and personal reasons maintained their upward trend. For females the direction of change from strike to post-strike year reversed and the reasons resumed more or less their importance of the pre-strike year.

For male respondents the direction of change for each of the three broad categories from strike to post-strike year maintained the same trend as noted from pre-strike to strike year.

Here we are concerned with four things: (1) Whether during the strike year and the year following there occurred a shift in the relative importance of various reasons given for leaving school--there did. (2) Whether the direction and magnitude of the shift was similar for males and females--it was not. (3) Whether the strike (specifically or by implication) played much of a role as a reason for dropping out--it did. (4) And whether, by the year after the strike, its disruption still was given as one of the reasons for dropping out of school--it was.

It is important not to "push" this evidence too far--beyond whatever deductions the figures will reasonably support. These are reports of students who have left school and *ipso facto* will contain a fair amount of *post hoc* justification for their action. The interview began with discussion of why the student left school. It can be assumed that a current scapegoat (like a curriculum change, the credit system, the semester system, a strike) will appear in a minority of responses and the dropout study of 1974/75 bears out this assumption--although that type of response was much less common than we anticipated. The interviewer begins by listing a variety of categories of reasons why someone might leave school, and then lets the student talk, classifying the "story" into the categories on our interview schedule. Only if the student's story had not, in any way, referred to the strike, in the 1975/76 and 1976/77 interviews at the end of the question dealing with reasons for leaving school, did the interviewer specifically ask the student, "Was your leaving school a direct result of the strike?" Obviously by introducing another category "strike" (as first or a contributing "reason") one would thereby reduce the magnitude of other categories. The question is, By how much? The reduction in importance of the economic reasons was excessive, particularly for the males for whom it has consistently been the main dropout motivation. Therefore, on this evidence, one would conclude that the male dropouts were differently and probably more adversely affected by the strike than the females--to the extent of increased numbers who gave this as their main reason why they left school and (males) were slower in returning to the *status quo ante*--to the extent that they had not re-established their pre-strike reason pattern by 1976/77.

First reason by grade level

Data were analyzed separately for each of the three years. Although the relative proportions in various categories and their rank varied, chi square values for each year were not statistically significant. The percentages are shown in Table II-16 and the rank order of the more common reasons in Table II-17.

Pre-Strike Year: In 1974/75 "employment" ranked as the most important reason given by students of all grades except Grade 13 (for which it ranked second); "dissatisfaction with school" was the most common reason for Grade 13 and it ranked second for the other grades (X^2 = 15.26, d.f. = 8, n.s.s.).

Strike Year: "Teachers' strike" was the most frequent principal reason given for all grades except Grade 9 (for which it ranked third, 13.6%); "dissatisfaction with school" (27%) and "employment" (22%) ranked first and second respectively with the Grade 9 dropouts (X^2 = 5.97, d.f. = 8, n.s.s.).

Post-Strike Year: "Dissatisfaction with school" was the most common reason, followed by "employment" given for dropouts from all grades (those from the 9th Grade gave equal importance to these two reasons, their ranks were tied); "low achievement" ranked third for the dropouts from Grade 9 (17.5%), and for those from Grade 11 (13.1%) it tied with teachers' strike as a first reason for leaving school. Teachers' strike ranked third in importance in the reasons given by the dropouts of Grades 11, 12 and 13. For those of Grade 11 it tied with "low achievement." The third rank for Grade 9 was "low achievement" (17.5%) and for Grade 10 was "other--marriage, travel, etc." (17.4%).

In summary: Although the introduction of an extra reason category ("strike") in the reasons for dropping out from school in the academic years 1975/76 and 1976/77 caused a reduction in the proportionate size of the reason categories and some shifting occurred in the rank order of importance of the first reasons given, changes in the incidence of reasons by grade level and the shifting in their order were not sufficient to be statistically significant.

SECOND REASON FOR LEAVING SCHOOL

Of the 138, 1974/75 interviewed dropouts who were willing to discuss *why* they had left school, 58 males and 41 females reported more than one reason. Of the 593 interviews of dropouts of the strike year, 223 males and 160 females gave more than one reason. Of the 543 interviews of 1976/77 dropouts, 169 males and 145 females gave more than one reason. We analyzed the second reasons separately. In the interview the order of importance of the reasons was established as carefully as possible. We can be reasonably precise as to which was considered the "first", "main" or "prime" reason. It was not always possible to get the student to delineate the scale between the others. So there may be some confusion as to the precise contribution of the second, third, fourth reasons, etc. We shall discuss the reasons which were specifically designated as second, considering them certainly as contributory rather than main reasons. Since they are contributory reasons one would expect their category ranking to complement that of the principal reasons. Our concern is to note what pattern changes appear in the distributions for 1975/76 and 1976/77.

Table II-14 shows the number and percentage responses in each second reason category by sex; Table II-18 shows their (grouped) rank order of importance and percentage distribution by sex. Table II-19 shows the top ranked second reasons for each of the three years by grade and Table II-20 the rank orderings of the entire set.

"Dissatisfaction with school" ranked top in importance as the second reason for leaving school for each of the three years. "Financial" ranked next in the pre-strike year but was replaced by "employment" the next year and "low achievement" in the post-strike one. As a contributory reason "teachers' strike" ranked third and fourth in importance in 1975/76 and 1976/77. The relative size of the various categories changed considerably from year to year. The groups defined by year of withdrawal were significantly different beyond the .001 level ($X^2 = 36.44$; d.f. = 10; $\rho \leq .001$). In other words, the second reasons given for leaving school were significantly related to the academic year in which the withdrawal took place. The pattern of the strike year was greatly different from that of the year before, as was that of the post-strike year from its preceeding year. This is hardly surprising when one considers the role of contributing reasons. If the pattern of prime reasons changed considerably one would expect the contributing ones (usually complementing reasons) to change accordingly.

Second reason by sex (Tables II-14 and II-18)

"Dissatisfaction with school" ranked as the most important second reason for males leaving school for each of these three academic years and for the pre-strike and post-strike years for females. During the strike year, the top second reason given by females was "employment". "Low achievement" ranked second in importance as a second reason given by males in the strike and post-strike years, and by females in the pre-strike and post-strike years. It was third in importance for the males of the pre-strike year. The observed variation in the response patterns of males and females was statistically significant ($X^2 = 12.40$, d.f. = 3, $p \leq .01$) for the strike year only. In Table II-18 we combined the reasons into the same four categories as were used for the first reasons: economic, school related, personal and other, and teachers' strike.

During the pre-strike year, the majority of the interviewees gave "school related" second reasons for leaving school. Females were somewhat more predominant in this group (75.8 *vs.* 62.1%). Economic reasons were of greater importance to males (29.4%) than females (14.6%). The relative importance of second reasons for leaving school shifted considerably during the strike year especially for the female respondents. Economic reasons and personal reasons were more commonly given by them and "school related" reasons were less frequent. The difference in the percentage distribution of the two sexes was reduced for all categories except the one designated as "personal".

For the post-strike year the "school related" reasons gained in importance. The teachers' strike remained a crucial factor for a substantial proportion of interviewees even during the post-strike year (14.2% males and 13.1% females).

Second reason by grade level (Table II-21)

Although some shifting occurred in the distribution of second reasons for leaving school, by grade level, over the years 1974/75 to 1976/77 it was not statistically significant.

SECTION 3 DESTINATIONS OF DROPOUTS

These data were gathered by a set of questions which started with, "What are you doing now?", and then led on to branching sets of questions about the activities. Again, the responses were tabulated by sex and grade level and analyzed by the academic year involved, to see if a change in pattern occurred in 1975/76.

Destination in relation to year of withdrawal (Table II-22)

More than half of the dropouts were working when they were interviewed. This was true for the three years under study. The percentage unemployed was almost the same for the pre-strike (23.6%) and post-strike (24%) years, but reduced in the strike year to 17.9%. It has been claimed that most dropouts who left school because of the strike returned shortly thereafter. It is true that destination sub-category "returned to school", which was rather small in 1974/75, grew in the strike year but it was still quite minor (15%). And the claim that many of the dropouts who left school because of the strike nevertheless continued their education elsewhere (in CAATs and other institutions) cannot be sustained by these data. That rather small sub-category (9% in 1974/75) dropped to 7.4% in the strike year and in the post-strike year declined further to 6.9%--which suggests that this is a general downward trend in destinations and was not greatly affected by the strike.

The observed variation in the distribution pattern of groups determined by destination and year of withdrawal was significant beyond the .05 level ($X^2 = 18.56$, d.f. = 8, $p \leq .05$).

Destination by sex (Table II-22)

Generally speaking dropout males are more likely to be found working than dropout females. This was true in the dropout studies which OISE undertook for the Ministry of Education and it is also true of this sample for these three years. In this sample the males were also over-represented among those returning to high school. The females were over-represented among those who resumed full-time studies elsewhere (but not in the pre-strike year) and in the category designated as "other". The difference in the relative proportions of the two sexes in the various destination categories was more pronounced in the strike year than in the other two. The variation in the distribution pattern of the two sexes was not significant for the pre-strike year, but for the strike and post-strike years the relationship between destination and sex was significant beyond the .001 level.

Destination in relation to grade level (Table II-23)

In the pre-strike year the working dropouts were over-represented among the losses from the 11th and 12th grades, the unemployed among those from Grades 9 and 10. In fact for the dropouts from Grade 9 an equal proportion were employed and unemployed (40%) in 1974/75 while the percentage of Grade 10 unemployed dropouts was almost as high (35.3% *vs.* 44.1% employed). In all other grades those employed greatly exceed those unemployed. The percentage of dropouts returning to high school (15.8%) was highest for the dropouts from Grade 13, lowest for those from Grade 9. The higher the grade the higher the percentage returning to school. The percentage studying elsewhere was also highest for Grade 13 (31.6%).

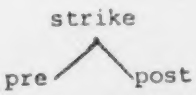
Except for Grades 11 and 12, an inverse relationship is discernable between grade level and percentage unemployed--higher the grade the lower the percentage of those unemployed. None of the 12th and 13th graders were represented in the category designated as "others". Destination was significantly related to grade level ($X^2 = 29.23$, d.f. = 16, $\rho \leq .05$). This picture accords with that given by the large OISE dropout study of 1974/75.

In the strike year the picture is very similar. The 12th grade (instead of 11th grade) dropouts in 1975/76 formed the largest percentage of working dropouts (63%) and their distribution by grade is somewhat more even, with those from Grade 9 much better represented (52%). In the categories "returning to high school or studying elsewhere" again dropouts from Grade 13 were predominant.

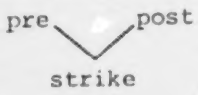
An inverse relationship seems to exist between grade level and percentage unemployed. This was true in the dropout studies which OISE undertook for the Ministry of Education. The other categories are randomly distributed. The observed variation in the destination pattern of various grade levels was highly significant (X^2 = 39.92, d.f. = 16, $p \leq .001$).

In the post-strike year the working dropouts were again over-represented among the 12th grade losses and this time also among those from Grade 13. They were somewhat under-represented among the interviewees from Grades 9 and 10. The percentage unemployed was highest for Grades 9 and 10 and very low for dropouts from Grades 12 and 13. The percentage unemployed generally was higher for the post-strike year than the previous year; this was true of all grades. This year the percentages returning to high school were higher for Grades 9 and 10 than for the other grades. The 12th graders were over-represented in the category designated as "other". The variation in the distribution pattern of groups determined by destination and grade level was highly significant (X^2 = 66.08, d.f. = 16, $p \leq .001$).

Our main interest in examining the distribution of the destinations of the dropouts over these three years is to see if any shift in pattern occurred in the strike year. We already knew that the majority who leave school prematurely eventually find a niche in employment. This did not change, but the charts showing the patterns of destination responses by sex and by grade level make it easier to note the pattern changes which took place. As can be see from Table II-24, the dominant pattern is either



or



In other words, a shift occurred in the strike year, and in the following year the pattern more or less returned to its former state.

One can note that the change occurred; one cannot say it was *caused* by the strike. Indeed it is difficult to see how the changed employment/ unemployment pattern could be directly related to the strike. For instance, the increase in the percentage of fully employed dropouts in the strike year seems to be anomalous, as the employment conditions were unlikely to have changed. Employment is a function of labour market conditions which were not drastically different in the strike year and certainly not likely to have been affected by the strike. However, it seems reasonable to assume that the "employability" of the dropouts changed in the strike year. In the non-strike years, dropouts may have been disproportionately "low achievers", that is unemployable relative to those who remain in school. The fully employed dropouts also tended to be from higher grade levels in school. In the strike year more higher achievers with average or above average performance in school entered the labour force as relatively employable students who would otherwise have remained in school. This conjecture to some extent is supported by the findings of the earlier study

> The higher the grade left, the more likely the dropout will be gainfully employed. If the dropout was a failing student he is less likely to be employed than his fellow students. (Watson, 1977, p. 125)

This finding about the level of dropouts' employability being highest in the strike year is also congruent with our findings that the dropouts of high socio-economic status (s.e.s.) as indicated by the fathers' occupational and educational attainments, were over-represented in the strike year sample. These students presumably have superior access to jobs by virtue of their fathers' direct control over employment opportunities (the fathers are employers in a loose sense) and through their fathers' network of contacts with other similar "employers". This might have resulted in more employment opportunities and probably better jobs for the high s.e.s. dropouts than were available to dropouts from low s.e.s. backgrounds who normally would have had to seek employment in an "open" market in which they were in competition with older and better qualified job seekers.

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[7] See Cicely Watson and Sharon McElroy, Ontario Secondary School Dropout Study, 1974-75.

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SECTION 4 PARENTAL INFLUENCE ON PLANS TO LEAVE SCHOOL

Our recent studies of dropouts have established that for the most part dropouts discuss their intentions to leave school with their parents, prior to making the decision. In a minority of cases the parents leave such decision to their children ("They're old enough to make their own decisions"). In few cases can the school be said to have played an influential role--most dropouts did not consult any school personnel before leaving. The influence of their peers was also negligible.

We wished to ascertain whether, for these boards which had a strike in 1975/76, the situation changed that year and whether the old pattern re-established itself in 1976/77. We therefore asked the students the same set of questions and their responses for the three years have been analyzed in the usual way. The question was: "Did you discuss your plans to leave school with your parents?"

Discussion with parents in relation to year of withdrawal (Table II-26)

Whatever the year, the majority of the dropouts discussed their plans with their parents and the proportion seeking parental guidance actually was higher in the strike year (74.2%) than in the others. The variation in the distribution pattern of the three years was significant at the .05 level ($X^2 = 8.36$, d.f. = 2, $\rho \leq .05$).

We cannot say that the added complication of the strike *caused* the additional consultation but it is reasonable to assume that it played some role in making it desirable.

Discussions in relation to sex (Table II-26)

The females show a higher percentage of dropouts who discussed their plans with their parents but the proportion who did so was actually identical in the strike and pre-strike years. It was the percentage of males seeking parental advice which increased in 1975/76 (from 62% to 71.4%), and then dropped again (to 64.4%). However, the difference in the response pattern of the two sexes was more marked in the pre-strike year than in the others. The relationship between response (yes *vs.* no) and sex was significant beyond the .05 for the pre-strike year but was not significant for the other two.

Discussions in relation to grade level (Table II-27)

In the pre-strike and strike years, the respondents from the three higher grades were more likely to have discussed their plans with their parents than those from Grades 9 and 10. In the post-strike year it was the respondents from Grades 9 and 10 who were over-represented among the discussants. In the grades at the extremes of the school (9-10 or 13) the variation pattern of positive responses was $\overset{\text{strike}}{\text{pre} \wedge \text{post}}$. That is, the consultation *increased* in 1975/76. In the other grades the pattern was the reverse, $\underset{\text{strike}}{\text{pre} \vee \text{post}}$. The observed variation in the distribution pattern of groups determined by grade level and item response was found to be significant beyond the .05 level but only for the strike year.

Plans in relation to destination grouping (Table II-28)

Does the tendency to discuss plans for leaving school vary according to the destination of the former student? That is, if he/she is likely to return later to school or to be studying elsewhere (both more acceptable to adults than just bumming around) is the student more ready to discuss dropping out with his parents? The data presented in Table II-28 permits comparison of those who returned to be full-time students (high school and elsewhere) with all others on item response for each year.

In the pre-strike, the dropouts who later returned to full-time study were somewhat under-represented among those who had discussed their school leaving plans with their parents. For the strike year this group was over-represented. However, the variance is slight. The observed variation in the distribution pattern of groups obtained by classifying respondents into destination grouping and item response was not statistically significant for any of the years under study.

In summary: In the strike year the incidence of potential dropouts discussing their plans with their parents significantly increased. The increase seems to have been slightly greater among boys than girls. In the pre-strike year there was a significantly greater degree of consultation by girls than by boys. In the strike and post-strike years this had changed. The representation of consultation is more or less what one would expect given the sex distribution of the sample. In other words, the boys' consultation level had now risen to what might be regarded as "normal".

Similarly, in the distribution of the categories by grade there had been no statistical significance in the pre-strike year and there was none in the post-strike year. But during 1975/76, consultation was (proportionately) more frequent among the dropouts from Grades 13, 9 and 10. The increase in the latter two is of interest because it is probable that the rise in the strike year is part of a rising trend (52.5%, 64.6%, 73.9% for Grade 9; 58.8%, 67.3%, 69.8% for Grade 10) whereas this is not the case with the dropouts from Grade 13. Here we see the familiar $\overset{\text{strike}}{\text{pre}\diagup\diagdown\text{post}}$ pattern. The consultation rose only in the strike year (69.2%, 74.2%, 66.5%) and then dropped once more.

Students who had discussed their dropout plans with their parents were then asked about the parents' reaction, and their responses were classified into the same response categories as were used for the earlier dropout studies. Again, the interest is to see if in 1975/76 a change occurred in the response pattern.

Parents' reaction in relation to year of withdrawal and sex (Table II-29)

The most common reported response of parents is that students are old enough to make their own decisions. This was true in all years (26.1%, 38.3% and 33.2%). Females (28.8%) were somewhat over-represented in this category in the pre-strike and under-represented in the post-strike year. Fewer parents (proportionately) were disappointed at their children's plans to leave school during the strike year (14.2%) in comparison with the other two. The percentage of parents who strongly opposed their children leaving school was higher for the pre-strike (18.9%) year than for the other two. The male respondents were over-represented in this category for all years under study.

The observed variation in the distribution pattern of groups determined by category of parents' reaction and year of withdrawal was not significant ($X^2 = 15.24$, d.f. = 8, n.s.s.). In other words, there is no evidence that parents who were consulted by their children wishing to drop out in the strike year reacted differently from parents of the year before or the year after.

The differences in the response patterns of the males and females were significant only for the post-strike year ($X^2 = 12.24$, d.f. = 4, $\rho \leq .05$).

Parents' reaction in relation to grade level (Table II-30)

In the pre-strike year those parents who considered their children old enough to decide for themselves were more likely to have children who dropped out of the upper grades (11, 12 and 13). The variance by grade was statistically significant at the $\leq .05$ level. A similar distribution was observed in the post-strike year but not so marked--there is no statistically significant relationship between response pattern and grade level. However, in the strike year the distribution was fairly even among the grades.

Dropouts from Grade 12 were somewhat over-represented among those whose parents approved their plans to leave school. This was true in all years under study. Those from Grades 9 and 11 were also over-represented in this category for the post-strike and pre-strike years respectively, but not in 1975/76.

Dropouts from Grade 10 were over-represented in the "parents disappointed" category in the pre- and post-strike years, and those from Grade

13 in the pre-strike and strike years.

The category "strongly opposed to leaving school" was over-represented among the dropouts from Grades 10 and 13 for the pre- and post-strike years. In the strike year the parents of dropouts from the lower grades (9 and 10) seem to have been more opposed to their children leaving school than was customarily the case.

The observed variation in the distribution pattern of groups determined by grade level and year of withdrawal was significant only for the pre-strike year ($X^2 = 27.04$, d.f. = 16, $p \leq .05$).

Parents' reaction by dropouts' destination grouping (Table II-31)

Those students who had discussed their plans and reported their parents' reaction were classified by item response and their destination category using only two groups (those returning to full-time study *vs.* all others). There was no statistically significant relationship between the two distributions for the pre-strike and the strike years but there was a highly significant one for the year following the strike.

Within the "approval" category those who had returned to full-time studies had always been over-represented, but in the year following the strike they rose to 47% of the total. Perhaps the parents' approval had been contingent on returning to studies after the strike was over rather than obtaining a really good job which was the case of the sample in the big Ministry strike of 1974/75. On the other hand, the shifts in the incidence of the "disappointed" and "strongly opposed" groups are also interesting. For those dropouts who returned to full-time study, parental disappointment reduces each year (16.7%, 12.2%, 11.8%). In the strike year the disappointment category is about as large among the studying dropouts as one would expect it to be from the incidence of this response in the sample. The next year it is significantly lower (11.8% *vs.* 21.9% in the category in the sample as a whole).

The strongly opposed category also reduces steadily over these years both for the total sample and for the studying dropout category. In fact, the reduction of the latter in the post-strike year helps contribute to the statistical significance in the two distributions. The studying dropouts whose parents were strongly opposed reduced over these years from 22.2% to 13.8% to 7.8%. The response category (i.e., for all the sample) reduced from 18.9% to 13.6% to 12.0%.

What is one to conclude from these figures? Parental disapproval and disappointment at their children's dropping out of school seems to be lessening. It was not unduly reduced, for those who eventually returned to school in the strike year but it did reach significant proportions the year following the strike. Possibly parents are becoming resigned to disruptions in their children's schooling and provided the children eventually return to school they now look upon dropping out merely as an episode of minor importance.

In any case, whatever the explanation, all that can be objectively stated here is that the variation in the distribution patterns of the groups determined by parents' reaction to the intention to leave school and the dropouts' destination grouping was found to be significant only for the post-strike year ($X^2 = 17.77$, d.f. = 4, $\rho \leq .01$).

The students who reported that they had *not* discussed their school leaving plans with their parents were asked, "Why not?" and their replies were sorted into the categories used for the earlier dropout studies. In a minority of cases the students maintained that their parents actually *wanted* them to leave school anyway (and both parties knew this, so there was no need for further discussion) or that the parents "didn't care", "were indifferent". But in all three years the most common category response was "other". In other words, the students described idiosyncratic and complicated family and other circumstances which made consultation difficult or undesirable. The reasons for not discussing school withdrawal with one's parents do not seem to be related to sex, nor are they related to the year the student left school. No real shift occurred in the strike year. These data are reported in Table II-32.

Reason for not discussing plans with parents by dropouts' grade level (Table II-33)

In the pre-strike year, the respondents from Grades 10, 12 and 13 were over-represented in the "other" category, but there was no statistical significance in the relationship of the two distributions. However, the observed variation in the distribution pattern of the groups determined by reason for leaving school and grade level was significant in the strike year ($X^2 = 18.74$, d.f. = 8, $\rho \leq .05$). In other words, a shift did occur in the grade distribution of the parental responses between 1974/75 and 1975/76 and by the post-strike year it had returned once more to its former non-significant distribution pattern. Since the "other" residual category is so varied we cannot tell what changes may have taken place in its composition. Let us look, therefore, at the "indifference" category. In the 1974/75 interviews 6 of the 40 students gave this response, two each in Grades 9 and 10, one each in Grades 11 and 12. In the strike year the proportionate incidence of this response was lower (12.9% of the sample instead of 15%) and the incidence by grade had shifted so that dropouts from Grades 11 and 12 were over-represented (18.4% and 17.4% *vs.* 12.9% in the sample response category). The following year the sample response had more less returned to the pre-strike level (16.1% *vs.* 15.0%) and Grade 12 dropouts continued to be over-represented, as well as those from Grade 10, this time.

What can one conclude from these figures? Well, a change did take place in the strike year. The distribution of responses which had not been statistically significant became so for that year and then returned to "normal". Students who did not consult their parents before leaving school, when categorized by grade, show a changed distribution of parental responses. The responses are so varied that they defy classification; for the most part they represent family circumstances and have been called "other". One of the parental responses which we did identify, because our attention was called to it in earlier studies, was "indifference". In the strike year the indifference seems to have been disproportionately reported by dropouts from Grades 11 and 12. This was not present to the same degree in 1974/75 or 1976/77.

Reason for not discussing plans to leave school with parents by dropouts' destination grouping (Table II-34)

There seems to be little doubt that some sort of relationship does exist between the distribution of the students' explanations as to why they did not consult their parents before leaving school and their destination grouping (those who returned to full-time study *vs.* the rest). But how to explain it is not clear. There is also little doubt that the distributions changed during the strike year and became even more statistically skewed than they had previously been. In the pre-strike year two-thirds of those studying full-time gave parental indifference as the reason for not discussing their plans; the corresponding percentage for the rest was only 18.8. The distribution of response patterns for the two major destination groupings were statistically significant ($X^2 = 12.37$, d.f. = 2, $\rho \leq .001$).

In the post-strike year the dropouts who had returned to full-time study were over-represented in the category "parents always wanted me to leave school" (7.4% *vs.* 1.5%) and the residual "others" (92.6% *vs.* 79.7%) and not represented at all in the parental indifference category. The variation in the distribution pattern of the two destination groupings was significant beyond the .02 level ($X^2 = 8.66$, d.f. = 2, $\rho \leq .02$). The shift over the strike year may be seen from the chart on the next page.

Pattern of Change in Reason for Not Discussing Plans with Parents by Year of Withdrawal and Destination Grouping (based on Table II-34)

Reason	Full-Time Students			Others		
	Pre-Str.	Str.	Post Str.	Pre-Str.	Str.	Post Str.
Parents always wanted me to leave	16.7	24.3	7.4	6.3	1.7	1.5
They were indifferent to my schooling	66.6	8.1	0	18.8	14.8	18.9
Other	16.7	67.7	92.6	74.9	83.5	79.7

SECTION 5 SCHOOL INFLUENCE ON THE DECISION TO LEAVE SCHOOL

First we shall analyze only the responses of those who had returned to school and were studying full-time. The majority of interviewed dropouts in this destination category had not consulted the school authorities before deciding to leave school. In fact, the school's direct influence on their decision was not perceived by the student as having any real importance. This was true of the total sample of the 1974/75 study as well as of this sample of boards for the three years we are studying. In the pre-strike year, 88% of those who replied to the question replied negatively (no consultation took place), in 1975/76, 82.8% and in 1976/77, 71.4%. There was no significant difference in the distributions by response category and year of withdrawal ($X^2 = 5.13$, d.f. = 2, n.s.s.).

School's influence by year of withdrawal and sex (Table II-35)

Female respondents were over-represented in the negative response category each year, but the observed variation was not large enough to produce significant values of chi square. The females' over-representation reduced in the strike year (from 90% to 85%) but the decline seems to have been part of a general trend which continued the next year (to 73.7%).

School influence in decision to leave school in relation to grade level (Table II-36)

In our sample of six systems, in the interviews for the pre-strike year so few students responded to the question that the data are not worth reporting by grade. In the strike year in our sample dropouts from the two lower grades were more likely to have consulted the school's personnel but the numbers are still very small. What evidence exists suggests that the higher the grade the less likely the dropout will consult school personnel.

In the post-strike year the dropouts from Grades 10 and 13 were over-represented among those who reported that they were influenced by school personnel, but again the numbers are very small and it should be noted that the observed variation in the distribution pattern by grade level and item response was not statistically significant for any of the three years under study.

In summary, for students who had returned to full-time study neither the student's sex nor the grade he leaves school seems to affect whether or not he will consult school personnel before making the dropout decision. The general reaction is not to seek school advice. This was as true for our sample of six boards in all three years under study as for the interviewed dropouts of the Ministry study of 1974/75. The strike seems to have had no effect upon the situation.

Now we shall analyze the responses of the rest of the sample to this question--i.e., the dropouts who were working, unemployed and other; all those not studying full-time anywhere. Each year more of these students discussed their withdrawal plans with school personnel than did not, but the size of the majority shifted over the three years of our study, to a statistically significant degree ($X^2 = 6.01$, d.f. = 2, $\rho \leq .05$) with a sharp reduction taking place in the strike year. The affirmative responses represented 63.3% in the pre-strike year, then 50.6%, then 54.7%. One explanation of the reduction in the strike year, of course, is that many of these dropouts left during the strike period when there were no teachers in the school to be consulted. When consultation took place, the respondents were more likely to discuss their plans with the guidance counsellor than with any other school personnel.

School discussants by sex and year of withdrawal (Table II-37)

The variation introduced by sex was not significant for any of the years under study.

School discussants by grade level and by year of withdrawal (Table II-38)

The variation in the response pattern by grade level appears to be random except for 10th and 12th graders who were under-represented among those who did not discuss plans with anyone at school. No significant relationship was found between item response and grade level for any of the years under study.

In summary: In the strike year, for students of these destinations (all except those who returned to full-time study), there was a mildly significant reduction in the frequency of students seeking the advice of school personnel before deciding to drop out of school. Some of these dropouts took place during the strike when teachers were not at the schools but that in itself would not account for the reduction. There was no real change in the response distributions by sex or by grade level; these factors do not seem to be significantly related to the student's decision to seek or not seek school advice.

The students who had sought the advice of school personnel about their dropout plans were asked about their advisors' reactions and these were classified using the same categories as had served the earlier dropout studies. The distribution of the responses is shown in Table II-39. These data cover only the working, unemployed and "other" dropouts, not those who had returned to full-time study. The percentage of respondents who were encouraged to stay in school steadily decreased over these three years from 66.1% to 53.8% to 47.9%, but the shift in the categories from 1974 to 1976 was not statistically significant.

School personnel's reaction by sex of respondent and year of withdrawal (Table II-39)

Each year the female dropouts were over-represented among those who were encouraged to *stay* in school and the males among those encouraged to *leave*. However, the apparent relationship between the reaction of school personnel and the sex of the respondent was not statistically significant for any year.

School personnel's reaction by grade level and year of withdrawal (Table II-40)

The 9th grade dropouts were over-represented among those who were encouraged by school personnel to stay in school. This was so for the three years under study. This was also true of dropouts from Grade 13 in the pre-strike and strike years. However, the variation in the response distribution pattern by grade level was not significant for any of these years.

In summary: The reaction of school personnel to students seeking advice about leaving school does not seem to have changed in the strike year from that of the year before or after, and it does not seem to relate either to the sex of the student or to the school grade the person is quitting.

The students who had neglected to consult school personnel before taking the dropout decision were asked why they did not. Their responses are shown in Table II-41, classified according to the categories used in the earlier dropout studies. These data refer only to the dropouts who were working, unemployed and "other"; they do not include the studying dropouts. The majority in all years "Felt it would be a waste of time", because they had definitely made up their minds. The variance by year of withdrawal was not statistically significant (X^2 7.55, d.f. = 6) although the majority was reduced in the strike year (63.1% to 54.6% to 68.5%); 8.4% of the 1975/76 respondents of these destinations replied that they had not consulted school personnel because they left during the strike and the teachers were not available to be consulted.

Reason for not discussing plans by sex and year of withdrawal (Table II-41)

The male respondents were somewhat over-represented in the majority category in the pre-strike year but thereafter were about as expected. The females were over-represented in the category designated as "other" for the pre- and post-strike years. But the observed variation introduced by sex was not significant for any of the years under study.

Reason for not discussing plans by grade level and year of withdrawal (Table II-42)

The variation seems to be random except for the following anomalies which should be noted:

In the pre-strike year the dropouts from Grade 9 are predominant among those who feel that "school personnel are just not interested in kids", and the dropouts from Grades 11 and 13 did not seek advice because they had already made up their minds.

In the strike year it was the dropouts from Grades 10 and 11 who were predominant among those who had already made up their minds so felt there was no need for consultation, and those from Grade 13 who left during the strike and allege that they did not consult because the teachers were not available (14.3% *vs.* 7.9% for the sample).

In the post-strike year it was the dropouts from Grade 12 who predominated among those who already had made up their minds.

The variation in the response patterns by grade level was not statistically significant for any of the years under study.

In summary: Whatever the destination of the dropout the strike seems to have had virtually no effect on the reasons students give for not consulting school personnel before they leave school. There are a few who left during the strike and excused their lapse by explaining that the teachers were not present. Nor does the distribution of explanations seem to relate to the sex of the student or the grade he is leaving--this applies to all three years.

SECTION 6 THE DROPOUTS' PLANS

All respondents were asked about their future plans. Since these are obviously related to their current activities, using the categories of the earlier dropout studies the responses are analyzed (a) of those who had returned to full-time study, and (b) the rest. Tables II-43 and II-44 show the responses of the former, Tables II-45 and II-46 those of the latter.

More than half of the studying dropouts expected to continue their education. This was true for every year under study, but the majority was larger in the strike year than the others. For purposes of the chi square test, the two personal plans were combined with "other" so that there were only three categories, "education", "job", "other". The observed distributions by year of withdrawal were not statistically significant (X^2 = 4.49, d.f. = 4); in other words, no great change in the plans of this group of dropouts seems to have occurred in the strike or post-strike year.

Plans by sex of studying dropouts and year of withdrawal (Table II-43)

Males were over-represented in the education category each year; females were consistently over-represented among those planning to get jobs after completing their current studies. However, again, the observed differences in the distribution patterns were not significantly related to sex for any of these years, though the chi square value of 5.89 (d.f. = 2) for the strike year was much greater than the corresponding values for the other years (X^2 = .90, d.f. = 2) and (X^2 = 1.97, d.f. = 2). It was close to the .05 level of significance. The chi square value would have had to be 5.99 to be significant at the .05 level.

Plans by grade level (Table II-44)

Unlike the finding of the large sample of the 1974/75 study, the plans of the studying dropouts of the sample were not significantly related to their distribution by grade level. However, for the strike year sample the incidence of dropouts planning to continue further education seemed to be positively correlated with the grade level they quit. In other words, the higher the grade the higher the proportion intending to continue with further education. Furthermore, the pattern of change in the proportion giving "further education" as the reply to the question showed a steady decrease over the three years (⋱) for Grades 9, 10 and 11. This pattern was entirely different from the one observed for Grades 12 and 13 (·/\·) which showed a noticeable peak in the strike year.

Therefore one would conclude that a disruption in the plans of students did occur in the strike year to cause the dropout plans of this sample to more closely resemble the pattern observed for the province in 1974/75. The changes which occurred arise from the proportionate decrease in the "further education" plans of dropouts from Grades 9, 10 and 11 and a proportionate increase in comparable plans of those dropping out from Grades 12 and 13.

Plans of the other dropouts

The distribution of the plans of the interviewees who were not studying full-time (i.e., those working, unemployed and engaged in other activities) are shown in Tables II-45 (by sex) and II-46 (by grade). There is no statistical significance in the relationship by sex. Except in the strike year there is no statistical significance in the relationship of the distributions by grade. In 1975/76 the distribution of the dropouts' plans by the school grade they had quit changed to assume a highly significant relationship. The ones who had left Grade 13 and had not returned to the secondary school by the time they were interviewed *and* who intended to study elsewhere increased dramatically in the strike year. Their relative proportion continued to increase in the post-strike year. But the total numbers in this plan category are very small in the non-strike years so one should not push this evidence too far. One can say the following: dropouts who have not returned to full-time study by the time they are interviewed for the most part are proud to be working and have plans which involve their jobs. This was less true in the strike year. That year a sizeable group (almost as large as the "stay at present job", "find better job" response categories: 85 *vs.* 96, 88) reported "other" education plans---that is, ones which did not involve the secondary school system. In what way these plans were a response to the strike situation we cannot be sure but there is no doubt that they represent a change and a rejection of the secondary school as a study milieu.

SECTION 7 DROPOUTS' OPINIONS ON THE METRO STRIKE

This section reports the interview findings on the four questions which were added at the end of the interviews given in 1975/76 and 1976/77. These questions specifically referred to the Metro teachers' strike and they were asked of all dropouts, whether from the schools of the Metro area or not. The Metro strike was so well publicized and controversial and it involved such large numbers that we felt it would enable all the interviewees to focus their replies on the larger issues involved rather than merely on the details of personality, which might be the case in the strike of the teachers of a small board operating a single school, where all the actors involved are personally known.

The questions were specific. The first was:

> "Do you think the Metro teachers were justified in going on strike?" (Table II-47)

In the strike year the dropouts split almost evenly on their replies. In the post-strike year there was a slight majority favourable to the teachers. But there was no significant shift in opinion over the two years. In the strike year, the females were significantly more condemnatory ($X^2 = 7.52 \leq .01$) but by the following year the distribution between the sexes of approval/disapproval had modified. A smaller majority of the girls were condemnatory and the significance of the response relationship to sex had disappeared. The distribution by grade level of the replies to the question is shown in Table II-48. There was no significant relationship between the item response and the grade the dropout had quit for any of the three years under study.

The second question was:

> "Do you think the teachers should have gone back sooner?"

Over three-quarters of the interviewed dropouts of the strike year replied "yes" and, although the proportion dropped in the following year it was still well above two-thirds. There was no statistically significant change in the responses over the two years (see Table II-49).

In the strike year there was no statistical significance in the distribution of the replies by sex although again the females were more condemnatory than the males. But the difference in response by sex was not statistically significant. By the following year, however, a greater proportion of the females felt that the teachers should have returned to work sooner and the difference in the response by sex had assumed a mild (at the .05 level) statistical significance.

When the replies are tabulated by the grade the dropout left they do not, in either year, show any statistical significance in the relationship of response to grade (see Table II-50).

The third question was:

> "Should the government have intervened sooner?"

The distribution of the responses by sex is shown in Table II-51. In the strike year more than 78% of the interviewed dropouts felt that the government should have intervened. In the following year this opinion was even slightly higher (79.6%) and between the two years no significant change in response had occurred.

In the strike year over three-quarters of the males and females thought that earlier intervention should have occurred, and the females felt this rather more strongly than the males but not to such an extent that it was of statistically significant dimensions. By the following year, however, the proportion of females who felt that intervention should have occurred had grown considerably (to 90.5%) and that of the comparable male group had diminished slightly (to 71.4%) so that there now appeared a mild (at the .05 level) statistical significance in the distributions by sex.

The distribution by grade level of the responses to the government intervention question is shown in Table II-52. There was no statistical significance in the relationship of response to the grade the dropout had quit.

The last question was:

> "By and large would you say you were on their (teachers') side?"

The majority of the group in the year affected did not consider that they were on the teachers' side (see Table II-53). In the following year the majority position had drifted to general support. In neither case were these overwhelming majorities (about 55% against in 1975/76 and 58% for in 1976/77), but the shift was of statistically significant dimensions ($X^2 = 5.16$, d.f. = 1, $\rho \leq .01$ level).

In the strike year there was a decided difference in the level of support by sex, the females were less supportive than the males (chi square = 8.81, d.f. = 1, $\rho \leq .01$ level). By the following year, however, the distribution of response by sex was virtually identical, 58% felt that on the whole yes they had been on the teachers' side and 42% on the whole they had not.

When the responses are tabulated by grade level they show no statistical significance in either year (see Table II-54).

In summary: The interviewed sample of dropouts from ten boards who experienced strike in 1975/76 divided fairly evenly as to whether the Metro teachers' strike was justified. This was true of the cohort from the strike year and the opinion had not greatly changed by the following year. However, a large majority of the 1975/76 dropouts (78.7%) felt that the teachers should have returned to work sooner and this proportion only dropped slightly the next year (i.e., no opinion change of significant proportion occurred).

The proportion who felt that the government ought to have intervened sooner was almost as large in the strike year (78.4%) and it grew slightly the following year, but not to a significant degree.

By and large, the majority felt that they did not support the teachers the year that the strike occurred; by and large, the majority of the following year felt that they had been on the teachers' side. A shift in opinion of significant proportion seems to have occurred. However, we cannot judge whether this *post hoc* reasoning of the 1976/77 cohort of dropouts is merely the more generous reaction of retrospect, or a reflection of the different response of a group which stayed in school over the strike year (and dropped out later) to another which dropped out during the year of the controversy. No serious opinion study was made of students of all school grades in the year of the strike. And the OISE opinion study which was part of this Ministry contract involved only Grade 13 students who entered a university in the year following a strike.

TABLE II-I

INTERVIEW RESPONSE SAMPLES FROM SCHOOL BOARDS AFFECTED BY TEACHERS' STRIKE COMPARED WITH THE CORRESPONDING POPULATIONS OF WITHIN YEAR DROPOUTS IN TERMS OF DISTRIBUTION BY SEX, FOR THE PRE-STRIKE, STRIKE AND POST-STRIKE YEARS

School Board #		Pre-Strike (1974-75)						Strike (1975-76)						Post-Strike (1976-77)					
		M		F		Total		M		F		Total		M		F		Total	
		N	%	N	%	N	Per Cent[1]	N	%	N	%	N	Per Cent[1]	N	%	N	%	N	Per Cent[1]
01	Sample	-	-	-	-	-	-	9	60.0	6	40.0	15	10.3	4	44.4	5	55.6	9	10.1
	Population	47	53.4	41	46.6	88		90	62.1	55	37.9	145		51	57.3	38	42.7	89	
02	Sample	-	-	-	-	-	-	10	76.9	3	23.1	13	2.0	18	58.1	13	41.9	31	3.2
	Population	239	60.1	159	39.9	398		313	49.3	322	50.7	635		522	53.2	459	46.8	981	
03	Sample	6	31.6	13	68.4	19	1.4	36	61.0	23	39.0	59	3.7	30	52.6	27	47.4	57	3.7
	Population	768	57.7	563	42.3	1331		954	59.4	653	40.6	1607		925	59.6	628	40.4	1553	
04	Sample	-	-	-	-	-	-	5	45.5	6	54.5	11	2.8	5	38.5	8	61.5	13	5.0
	Population	126	52.7	114	47.3	240		217	55.1	177	44.9	394		141	54.7	117	45.3	258	
05	Sample	15	83.3	3	16.7	18	1.1	50	62.5	30	37.5	80	3.9	27	51.9	25	48.1	52	2.8
	Population	1015	60.0	678	40.0	1693		1254	61.1	799	38.9	2053		1169	62.9	688	37.1	1857	
06	Sample	16	53.3	14	46.7	30	4.0	12	42.9	16	57.1	28	3.6	13	46.4	15	53.6	28	4.1
	Population	429	56.7	327	43.3	756		398	51.4	376	48.6	774		380	56.0	299	44.0	679	
07	Sample	9	45.0	11	55.0	20	.8	71	57.3	53	42.7	124	3.5	65	53.3	57	46.7	122	3.1
	Population	1552	59.1	1075	40.9	2627		2031	56.5	1560	43.5	3591		2316	58.0	1679	42.0	3995	
08	Sample	25	56.8	19	43.2	44	.9	143	55.9	113	44.1	256	3.3	133	56.4	103	43.6	236	3.1
	Population	2757	56.9	2085	43.1	4842		4382	56.1	3423	43.9	7805		4263	55.9	3359	44.1	7622	
09	Sample	13	[illegible]	8	[illegible]	21	4.4	32	58.2	23	41.8	55	4.5	21	[illegible]	28	57.1	49	3.3
	Population	292	[illegible]	160	[illegible]	[illegible]		686	56.6	526	43.4	[illegible]		847	57.5	[illegible]	42.5	[illegible]	
10	Sample	-	-	-	-	-	-	56	74.7	19	25.3	75	9.7	17	58.6	12	41.4	29	3.5
	Population	220	62.0	135	38.0	355		471	61.1	300	38.9	771		479	57.1	360	42.9	839	
Strike Boards Combined[2]	Sample	84	55.3	68	44.7	152	1.3	344	57.1	258	42.9	602	3.6	269	53.1	255	46.9	544	3.2
	Population	6813	58.1	4908	41.9	11721		9705	56.9	7337	43.1	17042		9900	57.6	7278	42.4	17178	
Strike Boards Combined	Sample	84	55.3	68	44.7	152		424	59.2	292	40.8	716		333	53.2	293	46.8	626	3.2
	Population	7445	58.2	5357	41.8	12802		10796	56.9	8191	43.1	18987		11093	57.3	8252	42.7	19345	
Chi square (d.f.=1)		.502 n.s.s.						.014 n.s.s.						4.45 p ≤ .05					

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[1] Sample total as a percentage of the parent population.

[2] Excluding school boards numbered 01, 02, 03, 04 and 10 from which no pre-strike year dropouts were interviewed.

TABLE II-2

INTERVIEW RESPONSE SAMPLES FROM SCHOOL BOARDS AFFECTED BY TEACHERS' STRIKE COMPARED WITH THE CORRESPONDING POPULATIONS OF WITHIN YEAR DROPOUTS IN TERMS OF DISTRIBUTION BY GRADE FOR THE PRE-STRIKE AND POST-STRIKE YEARS

School Board #			Pre-strike (1974-75)						Strike (1975-1976)						Post-strike (1976-77)					
			Grade						Grade						Grade					
			9	10	11	12	13	Total	9	10	11	12	13	Total	9	10	11	12	13	Total
01	Sample	N	-	-	-	-	-	-	1	2	9	2	1	15	-	3	3	3	-	9
		%	-	-	-	-	-	-	6.7	13.3	60.0	13.3	6.7	100.0	-	33.3	33.3	33.4	-	100.0
	Population	N	21	20	31	6	5	83	24	40	54	14	8	140	8	32	26	14	8	88
		%	25.3	24.1	37.4	7.2	6.0	100.0	17.2	28.5	38.6	10.0	5.7	100.0	9.1	36.4	29.5	15.9	9.1	100.0
02	Sample	N	-	-	-	-	-	-	1	2	2	5	3	13	-	9	7	4	11	31
		%	-	-	-	-	-	-	7.7	15.4	15.4	38.5	23.0	100.0	-	29.0	22.6	12.9	35.5	100.0
	Population	N	45	97	94	74	70	380	80	151	147	105	151	634	92	196	168	157	176	789
		%	11.8	25.6	24.7	19.5	18.4	100.0	12.6	23.8	23.2	16.6	23.8	100.0	11.7	24.8	21.3	19.9	22.3	100.0
03	Sample	N	-	4	5	5	5	19	3	5	14	19	18	59	6	7	21	11	12	57
		%	-	21.1	26.3	26.3	26.3	100.0	5.1	8.5	23.7	32.2	30.5	100.0	10.5	12.3	36.8	19.3	21.1	100.0
	Population	N	136	324	371	277	190	1,296	161	266	452	363	312	1,554	175	301	410	363	267	1,516
		%	10.5	25.0	28.6	21.3	14.6	100.0	10.4	17.1	29.0	23.4	20.1	100.0	11.5	19.9	27.0	24.0	17.6	100.0
04	Sample	N	-	-	-	-	-	-	1	3	3	2	2	11	-	4	6	1	2	13
		%	-	-	-	-	-	-	9.1	27.3	27.3	18.2	18.2	100.0	-	30.8	46.1	7.7	15.4	100.0
	Population	N	43	50	70	37	15	215	75	74	95	64	70	378	42	78	71	37	30	258
		%	20.0	23.3	32.5	17.2	7.0	100.0	19.8	19.6	25.2	16.9	18.5	100.0	16.3	30.1	27.5	14.3	11.6	100.0
05	Sample	N	1	5	8	1	2	17	9	32	19	11	9	80	6	21	9	7	7	50
		%	5.9	29.4	47.1	5.9	11.8	100.0	11.2	40.0	23.8	13.8	11.2	100.0	12.0	42.0	18.0	14.0	14.0	100.0
	Population	N	225	600	438	246	191	1,700	229	685	513	317	309	2,053	242	625	487	247	256	1,857
		%	13.2	35.3	25.8	14.5	11.2	100.0	11.2	33.4	25.0	15.4	15.1	100.0	13.0	33.7	26.2	13.3	13.8	100.0
06	Sample	N	5	9	9	4	3	30	1	3	8	12	5	29	4	5	3	8	8	28
		%	16.7	30.0	30.0	13.3	10.0	100.0	3.4	10.3	27.6	41.5	17.2	100.0	14.3	17.8	10.7	28.6	28.6	100.0
	Population	N	138	188	181	159	55	721	95	140	211	248	112	806	84	123	188	168	102	665
		%	19.1	26.1	25.1	22.1	7.6	100.0	11.8	17.4	26.1	30.8	13.9	100.0	12.6	18.5	28.3	25.3	15.3	100.0
07	Sample	N	2	5	8	4	-	19	21	21	29	23	30	124	17	22	21	23	38	121
		%	10.5	26.3	42.1	21.1	-	100.0	16.9	16.9	23.5	18.5	24.2	100.0	14.0	18.2	17.4	19.0	31.4	100.0
	Population	N	564	501	575	408	579	2,627	645	600	801	705	840	3,591	902	639	758	866	824	3,989
		%	21.4	19.1	21.9	15.5	22.1	100.0	17.9	16.7	22.3	19.7	23.4	100.0	22.6	16.0	19.0	21.7	20.7	100.0
08	Sample	N	5	5	13	6	8	37	41	39	60	41	58	239	26	47	50	38	44	205
		%	13.5	13.5	35.2	16.2	21.6	100.0	17.2	16.3	25.0	17.2	24.3	100.0	12.7	22.9	24.4	18.5	21.5	100.0
	Population	N	931	1037	1007	672	428	4,075	1636	1475	1537	1223	1054	6,925	1580	1464	1454	1047	997	6,542
		%	22.8	25.5	24.7	16.5	10.5	100.0	23.6	21.3	22.2	17.7	15.2	100.0	24.2	22.4	22.2	16.0	15.2	100.0
09	Sample	N	6	8	5	1	1	21	8	5	20	12	8	53	4	8	18	9	9	48
		%	28.6	38.0	23.8	4.8	4.8	100.0	15.1	9.4	37.8	22.6	15.1	100.0	8.3	16.7	37.4	18.8	18.8	100.0
	Population	N	110	129	115	76	39	469	266	304	294	210	113	1,187	326	324	359	262	123	1,394
		%	23.5	27.5	24.5	16.2	8.3	100.0	22.4	25.6	24.8	17.7	9.5	100.0	23.4	23.2	25.8	18.8	8.8	100.0
10	Sample	N	-	-	-	-	-	-	14	12	21	16	12	75	9	6	4	6	3	28
		%	-	-	-	-	-	-	18.7	16.0	28.0	21.3	16.0	100.0	32.2	21.4	14.3	21.4	10.7	100.0
	Population	N	44	88	96	66	76	370	169	156	191	147	122	785	187	153	187	114	134	775
		%	11.9	23.8	26.0	17.8	20.5	100.0	21.5	19.9	24.4	18.7	15.5	100.0	24.1	19.8	24.1	14.7	17.3	100.0
Strike Boards Combined	Sample	N	19	36	48	21	19	143	100	124	185	143	146	698	72	132	142	110	134	590
		%	13.3	25.2	33.5	14.7	13.3	100.0	14.3	17.8	26.5	20.5	20.9	100.0	12.2	22.4	24.1	18.6	22.7	100.0
	Population	N	2257	3034	2976	2021	1640	11,938	3380	3891	4295	3396	3091	18,053	3638	3935	4108	3275	2917	17,873
		%	18.9	25.4	25.0	16.9	13.8	100.0	18.7	21.6	23.8	18.8	17.1	100.0	20.4	22.0	23.0	18.3	16.3	
Strike Boards Combined[1]	Sample	N	19	36	48	21	19	143	83	105	150	118	128	584	63	110	122	96	118	509
		%	13.3	25.2	33.5	14.7	13.3	100.0	14.2	18.0	25.7	20.2	21.9	100.0	12.4	21.6	24.0	18.9	23.1	100.0
	Population	N	2104	2779	2687	1838	1482	10,890	3032	3470	3808	3066	2740	16,116	3309	3476	3656	2953	2569	15963
		%	19.3	25.5	24.7	16.9	13.6	100.0	18.8	21.5	23.6	19.1	17.0	100.0	20.7	21.8	22.9	18.5	16.1	100.0
Chi square (d.f.=4)			7.63 n.s.						13.22 p<.001						33.19 p<.001					

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[1] Excluding school boards numbered 01, 02, 04, and 10 from which no pre-strike year dropouts were interviewed.

TABLE II-3

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY PARENTS' COUNTRY OF BIRTH BY YEAR OF WITHDRAWAL

Country of Birth	Year of Withdrawal	Father N	Father %	Mother N	Mother %
Canada	Pre Strike	92	64.3	95	65.6
	Strike	326	58.0	343	60.5
	Post-Strike	307	58.4	325	60.9
United States	Pre-Strike	4	2.8	5	3.4
	Strike	11	2.0	7	1.2
	Post-Strike	6	1.1	8	1.5
Great Britain	Pre-Strike	9	6.3	9	6.2
	Strike	33	5.9	41	7.2
	Post-Strike	31	5.9	32	6.0
Ireland	Pre-Strike	3	2.1	3	2.1
	Strike	4	.7	5	.9
	Post-Strike	7	1.3	6	1.1
France	Pre-Strike	-	-	1	.7
	Strike	2	.4	-	-
	Post-Strike	1	.2	1	.2
Germany	Pre-Strike	4	2.8	5	3.4
	Strike	9	1.6	14	2.5
	Post-Strike	8	1.5	11	2.1
Italy	Pre-Strike	11	7.7	10	6.9
	Strike	56	10.0	53	9.3
	Post-Strike	55	10.5	52	9.7
Other European	Pre-Strike	14	9.8	11	7.6
	Strike	57	10.2	44	7.7
	Post-Strike	61	11.6	54	10.1
Other Non-European	Pre-Strike	6	4.2	6	4.1
	Strike	63	11.2	61	10.7
	Post-Strike	50	9.5	45	8.4
Total	Pre-Strike	143	100.0	145	100.0
	Strike	561	100.0	568	100.0
	Post-Strike	526	100.0	534	100.0
Chi square (d.f. = 10)		9.94	n.s.s.	12.28	n.s.s.

TABLE II-4

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY HIGHEST GRADE COMPLETED BY EACH PARENT BY YEAR OF WITHDRAWAL

Highest Grade Completed	Year of Withdrawal	Father		Mother	
		N	%	N	%
No Formal Schooling	Pre-Strike	4	3.4	1	.9
	Strike	9	2.3	12	2.8
	Post-Strike	7	1.7	9	2.0
Grade 1 to Grade 3	Pre-Strike	5	4.2	-	-
	Strike	19	4.8	14	3.2
	Post-Strike	75	3.6	17	3.8
Grade 4 to Grade 6	Pre-Strike	12	10.1	11	9.4
	Strike	40	10.1	29	6.7
	Post-Strike	54	13.0	43	9.5
Grade 7 to Grade 8	Pre-Strike	27	22.8	15	12.7
	Strike	48	12.2	61	14.0
	Post-Strike	75	18.2	69	15.3
Grade 9	Pre-Strike	11	9.2	12	10.3
	Strike	37	9.4	36	8.3
	Post-Strike	24	5.8	31	5.9
Grade 10	Pre-Strike	10	8.4	25	21.3
	Strike	35	8.9	55	12.5
	Post-Strike	39	9.4	48	10.6
Grade 11	Pre-Strike	10	8.4	13	11.1
	Strike	28	7.1	49	11.2
	Post-Strike	30	7.2	45	10.0
Grade 12	Pre-Strike	17	14.3	26	22.1
	Strike	72	18.1	101	23.1
	Post-Strike	76	18.6	103	22.7
Grade 13	Pre-Strike	6	5.0	6	5.4
	Strike	41	10.4	46	10.6
	Post-Strike	35	8.5	33	7.3
1 or 2 Years University	Pre-Strike	3	2.5	1	.9
	Strike	17	4.3	11	2.5
	Post-Strike	12	2.9	14	3.1
3 or 4 Years University	Pre-Strike	12	10.1	4	3.4
	Strike	27	6.8	16	3.7
	Post-Strike	28	6.8	15	3.3
University Graduate School	Pre-Strike	1	.8	-	-
	Strike	15	3.8	2	.5
	Post-Strike	8	1.9	9	2.0
Other Non-University but Post-Secondary	Pre-Strike	1	.8	3	2.5
	Strike	7	1.8	4	.9
	Post-Strike	10	2.4	16	3.5
Total Number of Respondents	Pre-Strike	119	100.0	117	100.0
	Strike	395	100.0	436	100.0
	Post-Strike	414	100.0	452	100.0
Chi square (d.f.= 4)		21.75 $p \leq .001$		65.04 $p \leq .001$	

TABLE II-5

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY PARENTS' EMPLOYMENT STATUS BY YEAR OF WITHDRAWAL

Parents' Employment Status	Year Of Withdrawal	Father N	Father %	Mother N	Mother %
Working	Pre-Strike	118	88.7	72	53.7
	Strike	455	91.5	286	53.5
	Post-Strike	423	93.4	292	57.7
Not Working	Pre-Strike	15	11.3	62	46.3
	Strike	42	8.5	249	46.5
	Post-Strike	30	6.6	214	42.3
Total Respondents	Pre-Strike	133	100.0	134	100.0
	Strike	497	100.0	535	100.0
	Post-Strike	453	100.0	506	100.0
Chi square (d.f.=2)		3.23	n.s.s.	2.05	n.s.s.

TABLE II-6

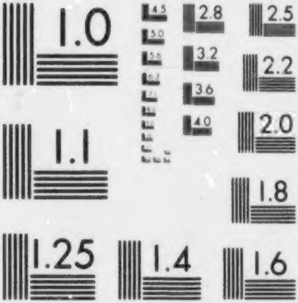
NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY TYPE OF PARENTS' OCCUPATION AND SEX BY YEAR OF WITHDRAWAL

Occupation Type	Year of Withdrawal	Father		Mother	
		N	%	N	%
Managerial, Professional Technical	Pre-Strike	33	28.0	17	23.3
	Strike	179	40.1	66	23.3
	Post-Strike	114	29.3	51	18.8
Clerical	Pre-Strike	2	1.7	18	24.7
	Strike	19	4.2	94	33.2
	Post-Strike	17	4.4	88	32.4
Sales	Pre-Strike	10	8.5	10	13.7
	Strike	28	6.3	18	6.4
	Post-Strike	22	5.6	29	10.7
Services & Recreation	Pre-Strike	11	9.3	15	20.5
	Strike	39	8.7	36	12.7
	Post-Strike	31	8.0	53	19.6
Transportation and Communication	Pre-Strike	9	7.6	2	2.7
	Strike	32	7.2	8	2.8
	Post-Strike	33	8.5	6	2.2
Craftsman, Factory (Production process)	Pre-Strike	42	35.6	7	9.6
	Strike	111	36.8	52	18.4
	Post-Strike	145	37.3	42	15.5
Labourer	Pre-Strike	10	8.5	3	4.1
	Strike	30	6.7	6	2.1
	Post-Strike	25	7.2	1	.4
Other (farmer, logger, fisherman, trapper, miners)	Pre-Strike	1	.8	1	1.4
	Strike	5	1.1	1	.4
	Post-Strike	2	.5	1	.4
Unclassified	Pre-Strike	-	-	-	-
	Strike	4	.9	2	.7
	Post-Strike	-	-	-	-
Total Respondents	Pre-Strike	118	100.0	73	100.0
	Strike	447	100.0	283	100.0
	Post-Strike	389	100.0	271	100.0
Chi square	Pre-Strike Strike Post-Strike	21.52 (d.f.=10)	P ≤ .02	15.04 (d.f.=8)	n.s.s.

TABLE II-7

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES WHOSE PARENTS WERE NOT WORKING BY SOURCE OF PARENTS' INCOME AND YEAR OF WITHDRAWAL

Source of Income	Year of Withdrawal	Father		Mother	
		N	%	N	%
Pension	Pre-strike	4	40.0	1	50.0
	Strike	21	84.0	2	11.8
	Post-strike	15	88.2	3	15.0
Unemployment Insurance	Pre-strike	1	10.0	1	50.0
	Strike	4	16.0	7	41.2
	Post-strike	1	5.9	2	10.0
Welfare	Pre-strike	5	50.0	-	-
	Strike	-	-	8	47.0
	Post-strike	1	5.9	15	75.0
Total Respondents	Pre-strike	10	100.0	2	100.0
	Strike	25	100.0	17	100.0
	Post-strike	17	100.0	20	100.0


1.0
4.5
5.0
5.6
6.3
7.1
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.1
1.8
1.25
1.4
1.6

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

TABLE II-8

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY REASON FOR PARENTS NOT WORKING AND YEAR OF WITHDRAWAL

Reason for Parents not working	Year of Withdrawal	Father		Mother	
		N	%	N	%
Housewife	Pre-strike	-	-	33	89.2
	Strike	-	-	56	80.0
	Post-strike	-	-	142	93.4
Incapacitated	Pre-strike	2	66.7	3	8.1
	Strike	7	77.8	9	12.9
	Post-strike	8	72.7	9	5.9
Looking for job	Pre-strike	1	33.3	1	2.7
	Strike	2	22.2	5	7.1
	Post-strike	3	27.3	1	.7
Total Respondents	Pre-strike	3	100.0	37	100.0
	Strike	9	100.0	70	100.0
	Post-strike	11	100.0	152	100.0
Other[1]	Pre-strike	2	13.3	9	
	Strike	5	12.8	134	
	Post-strike	1	3.4	14	
Chi square (d.f. = 2)		Numbers too small for Chi square		8.92	$p \leq .02$

[1] This category was not taken into account in computing chi square as it includes all miscellaneous responses concerning source of income and/or reason for parents not working.

TABLE II-9

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY NUMBER OF SIBLINGS AND YEAR OF WITHDRAWAL

Number of Siblings	Pre-Strike		Strike		Post-Strike	
	N	%	N	%	N	%
None	-	-	35	6.3	22	4.2
One	25	18.4	121	21.7	105	20.2
Two	37	27.3	137	24.7	137	26.2
Three	29	21.3	94	16.9	104	20.0
Four	12	8.8	72	12.9	59	11.3
Five	14	10.3	39	7.0	31	6.0
Six	6	4.4	29	5.2	29	5.6
Seven	4	2.9	13	2.3	16	3.1
Eight	2	1.5	8	1.4	11	2.1
Nine	7	5.1	9	1.6	7	1.3
Total Respondents	136	100.0	557	100.0	521	100.0

Chi Square = 22.15 d.f. = 16 n.s.s.

TABLE II-10

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Have any of your brothers and sisters dropped out of school?"

Year Of Withdrawal / Response	Pre-Strike		Strike		Post-Strike	
	N	%	N	%	N	%
Yes	65	47.8	221	42.7	204	41.1
No	71	52.2	297	57.3	292	58.9
Total Respondents	136	100.0	518	100.0	496	100.0
Chi square = 1.94	d.f. = 2				n.s.s.	

TABLE II-11

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY ANNUAL INCOME OF FAMILY AND YEAR OF WITHDRAWAL

Year OF Withdrawal / Annual Income	Pre-Strike		Strike		Post-Strike	
	N	%	N	%	N	%
Under $6,000	1	2.0	8	3.0	18	6.7
$ 6,000-$ 7,200	1	2.0	11	4.2	20	7.4
$ 7,201-$ 8,400	2	3.8	8	3.0	13	4.8
$ 8,401-$ 9,600	1	2.0	13	4.9	21	7.8
$ 9,601-$10,800	4	7.6	11	4.2	32	11.9
$10,801-$12,000	6	11.5	33	12.5	21	7.8
$12,001-$15,000	(37	71.1)*	102	38.4	33	12.3
$15,001-$20,000	-	-	35	13.2	53	19.7
Over $20,000	-	-	44	16.6	58	21.6
Total	52	100.0	264	100.0	269	100.0
Chi square = 31.74	d.f. = 12				p ≤ .01	

*For Pre-Strike year, this group includes students with family income over $15,000 as well.

TABLE II-12

PERCENTAGE DISTRIBUTION AND RANK ORDER OF FIRST REASON FOR LEAVING SCHOOL BY YEAR OF WITHDRAWAL

First Reason	Pre-Strike (N=139)		Strike (N=593)		Post-Strike (N=543)	
	%	Rank	%	Rank	%	Rank
Employment	42.8	1	17.0	3	19.0	2
Financial	9.4	3	4.7	7	3.9	8
Economic	52.2		21.7		22.9	
Dissatisfaction with school	28.3	2	19.6	2	23.6	1
Dissatisfaction with teachers or their teaching	5.8	5	2.7	9	6.4	7
Dissatisfaction with peers	-	10	1.1	10	3.3	9
Low achievement	6.5	4	11.6	4	11.4	4
School	40.6		35.0		44.7	
Home Condition(s)	0.7	9	3.5	8	2.8	10
Health/Medical	2.1	8	4.8	6	7.7	6
Other (marriage, travel)	2.2	6.5	10.4	5	10.1	5
Personal	5.0		18.7		20.6	
Teachers' Strike	2.2		24.6	1	11.8	3
TOTAL	100.0		100.0		100.0	

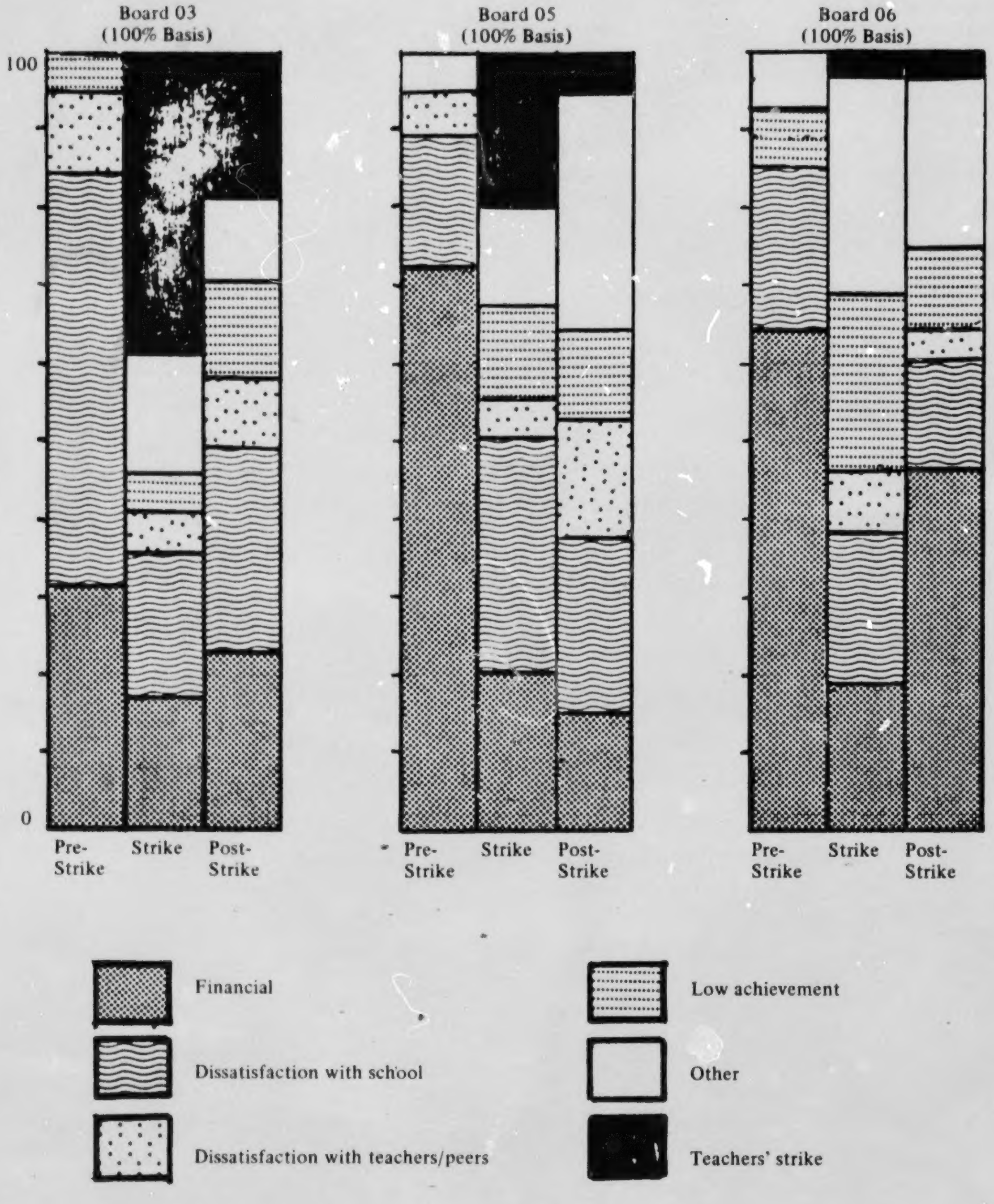


Figure II.a Principal Reason for Leaving School by Year of Withdrawal for School Boards No. 03, No. 05, and No. 06 (Based on Table II.13)

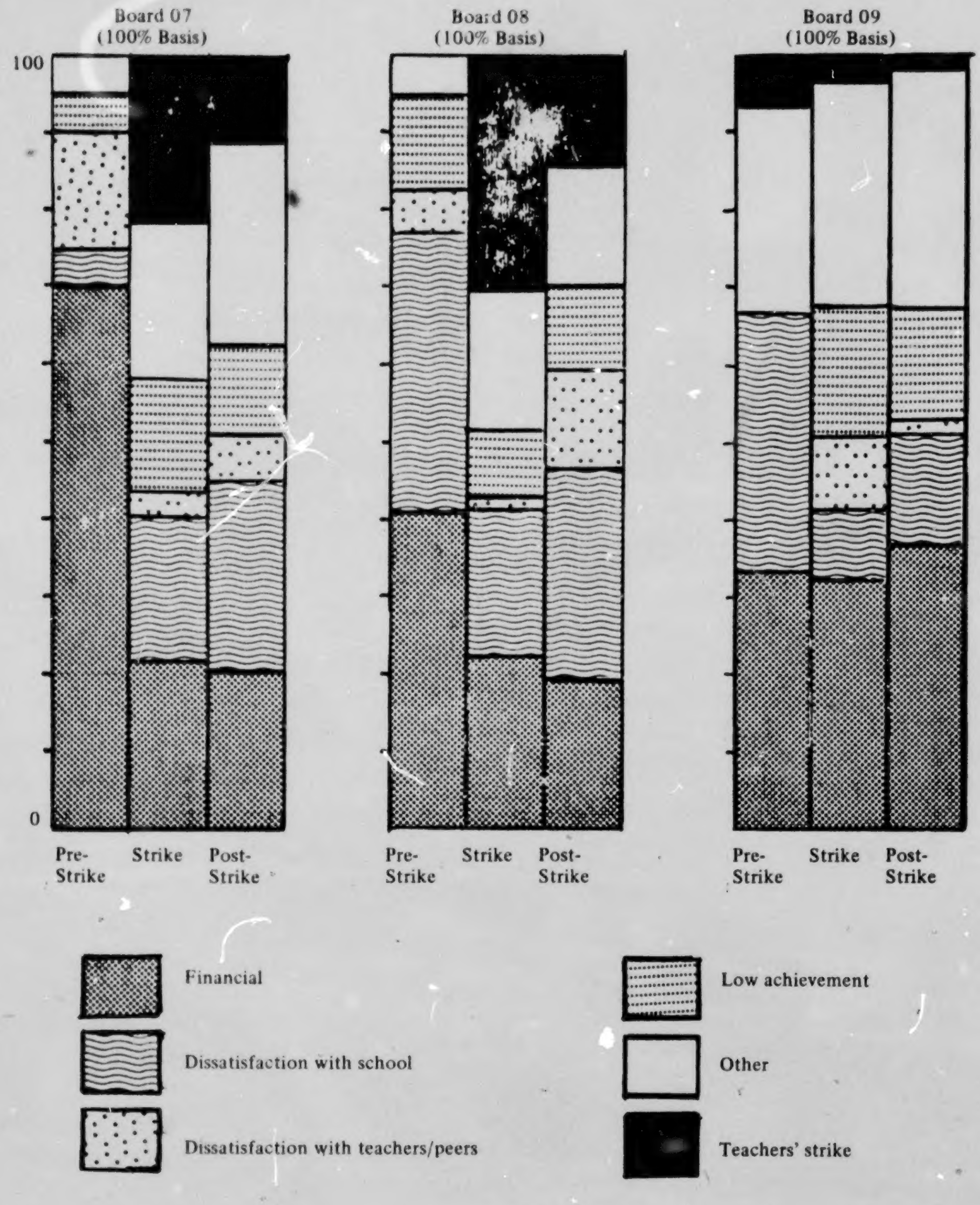


Figure II.b Principal Reason for Leaving School by Year of Withdrawal for School Boards No. 07, No. 08, and No. 09 (Based on Table II.13)

TABLE II-13

PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY FIRST PEASON FOR LEAVING SCHOOL, SCHOOL BOARD AND YEAR OF WITHDRAWAL

First Reason	Year of Withdrawal		School Board #										Total of Boards without asterisk	
			01 *	02 *	03	04 *	05	06	07	08	09	10 *	N	%
Employment related	Pre-strike	%	-	-	15.8	-	61.1	60.7	70.0	23.1	33.4	-	59	42.2
	Strike	%	42.9	53.8	11.9	9.1	18.8	19.2	17.0	16.1	26.4	22.6	103	17.2
	Post-strike	%	11.1	16.1	21.1	15.5	9.4	39.3	17.2	17.7	22.5	3.4	103	18.7
Financial	Pre-strike	%	-	-	15.8	-	11.1	3.6	-	17.9	-	-	13	9.4
	Strike	%	-	-	8.1	-	1.3	-	4.8	6.3	5.7	2.7	29	4.9
	Post-strike	%	-	16.1	1.8	-	5.7	7.1	3.3	1.7	14.3	10.3	21	3.8
Dissatisfaction with school	Pre-strike	%	-	-	52.6	-	16.7	21.4	5.0	38.9	33.3	-	39	28.1
	Strike	%	7.1	15.4	18.6	9.1	30.0	19.2	18.6	18.8	9.3	25.3	116	19.4
	Post-strike	%	44.5	16.1	26.3	23.0	22.6	14.3	24.6	27.3	14.3	24.1	134	24.3
Dissatisfaction with teacher(s), or their teaching	Pre-strike	%	-	-	10.5	-	5.6	-	15.0	5.1	-	-	8	5.8
	Strike	%	-	-	5.1	-	2.5	7.7	2.4	2.2	5.7	2.7	16	2.6
	Post-strike	%	22.2	3.2	7.0	15.5	9.4	-	3.3	8.7	2.0	6.9	35	6.3
Dissatisfaction with pupils, or peer group influence	Pre-strike	%	-	-	-	-	-	-	-	-	-	-	-	-
	Strike	%	-	-	-	-	2.5	-	.8	.4	3.8	-	6	1.0
	Post-strike	%	-	-	1.8	-	5.7	3.6	2.5	4.1	-	3.4	18	3.3
Home condition(s) or indifferent attitude of parents	Pre-strike	%	-	-	-	-	-	3.6	-	-	-	-	1	.7
	Strike	%	-	-	5.1	-	-	7.7	4.8	3.5	1.9	2.7	21	3.5
	Post-strike	%	-	3.2	-	-	5.7	-	3.3	2.5	4.1	10.4	15	2.7
Low achievement	Pre-strike	%	-	-	5.3	-	-	7.1	5.0	12.8	-	-	9	6.5
	Strike	%	-	15.4	5.1	-	12.5	23.2	14.5	9.0	17.0	8.0	69	11.6
	Post-strike	%	22.2	13.0	12.3	23.0	11.3	10.7	11.5	10.7	14.3	20.3	63	11.4
Health related	Pre-strike	%	-	-	-	-	-	-	5.0	-	13.3	-	3	2.2
	Strike	%	14.3	7.7	6.8	9.1	5.0	7.7	3.2	3.1	13.2	2.7	29	4.5
	Post-strike	%	-	16.1	7.0	-	7.5	10.7	5.6	6.2	20.4	10.4	43	7.8
Teachers' strike	Pre-strike	%	-	-	-	-	-	-	-	-	6.7	-	1	.7
	Strike	%	35.7	7.7	39.0	63.6	20.0	3.8	21.8	30.2	3.8	33.3	146	24.5
	Post-strike	%	-	3.2	19.2	-	5.7	3.6	11.5	14.1	2.0	-	64	11.6
Other (marriage, travel)	Pre-strike	%	-	-	-	-	5.5	3.6	-	5.1	13.3	-	6	4.3
	Strike	%	-	-	3.3	9.1	7.4	11.5	12.1	11.4	13.2	-	62	10.4
	Post-strike	%	-	13.0	3.5	23.0	17.0	10.7	17.2	7.0	6.1	10.4	55	10.1
Total Respondents	Pre-strike	N	-	-	19	-	18	28	20	30	15	-	139	100.0
		%	-	-	100.0	-	100.0	100.0	100.0	100.0	100.0	-		
	Strike	N	14	13	59	11	80	26	124	255	53	75	597	100.0
		%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
	Post-strike	N	9	31	57	13	53	28	122	242	49	29	551	100.0
		%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		

* The pre-strike year dropouts from these school boards were not interviewed.

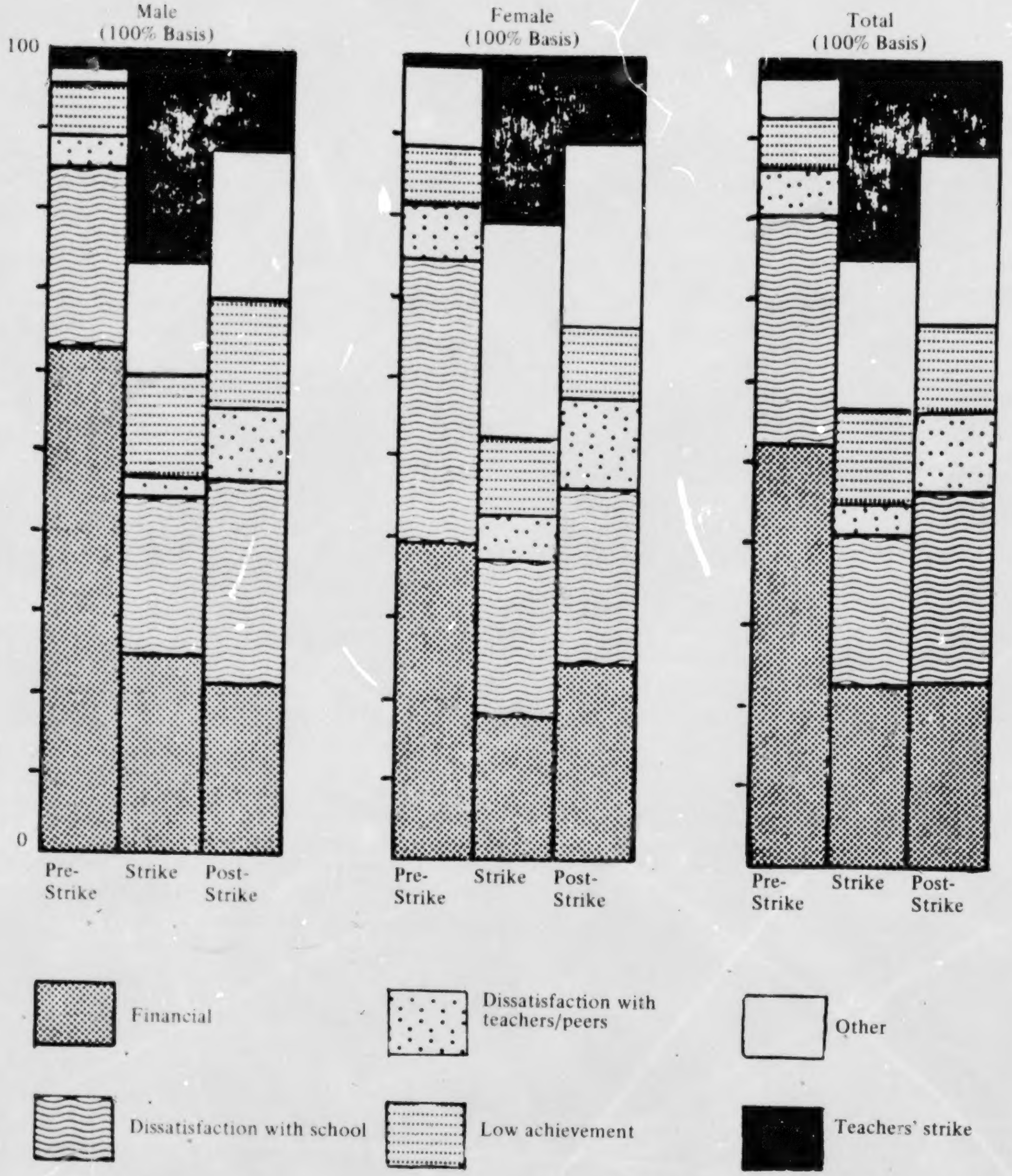


Figure II.c Distribution of Interviewees by First Reason for Leaving School, Sex and Year of Withdrawal (Based on Table II.14)

TABLE II-14

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY FIRST AND SECOND REASONS FOR LEAVING SCHOOL, SEX AND YEAR OF WITHDRAWAL

Reason for Leaving	Year Of Withdrawal	First Reason						Second Reason					
		Male		Female		Total		Male		Female		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Employment Related	Pre-Strike	40	53.3	19	30.1	59	42.8	1	1.7	3	7.3	4	4.0
	Strike	67	19.7	34	13.3	101	17.0	35	15.7	31	19.4	66	17.2
	Post-Strike	52	18.1	51	20.1	103	19.0	19	11.2	12	8.3	31	9.9
Financial	Pre-Strike	7	9.3	6	9.5	13	9.4	16	27.7	3	7.3	19	19.2
	Strike	16	4.8	12	4.7	28	4.7	27	12.1	14	8.8	41	10.6
	Post-Strike	9	3.1	12	4.7	21	3.9	14	8.3	9	6.2	23	7.3
Dissatisfaction with School	Pre-strike	17	22.7	22	34.9	39	28.3	18	31.1	17	41.6	35	35.5
	Strike	66	19.5	50	19.6	116	19.6	46	20.7	26	16.2	72	18.8
	Post-Strike	74	25.6	54	21.3	128	23.6	43	25.4	37	25.6	80	25.5
Dissatisfaction with teacher(s), or the teaching	Pre-Strike	3	4.0	5	7.9	8	5.8	7	12.1	4	9.8	11	11.1
	Strike	6	1.8	10	3.9	16	2.7	18	8.2	12	7.5	30	7.9
	Post-Strike	18	6.2	17	6.7	35	6.4	21	12.4	18	12.4	39	12.4
Dissatisfied with peers, or peer group influence	Pre-Strike	-	-	-	-	-	-	-	-	4	9.7	4	4.0
	Strike	2	.6	4	1.6	6	1.1	4	1.7	3	1.9	7	1.9
	Post-Strike	6	2.1	12	4.7	18	3.3	4	2.4	5	3.4	9	2.9
Home condition(s)/ indifferent attitude of parents	Pre-Strike	-	-	1	1.6	1	.7	3	5.1	1	2.4	4	4.0
	Strike	10	3.0	11	4.3	21	3.5	5	2.1	7	4.3	12	3.1
	Post-Strike	5	1.7	10	3.9	15	2.8	4	2.4	8	5.5	12	3.7
Low Achievement	Pre-Strike	5	6.7	4	6.4	9	6.5	11	18.9	6	14.7	17	17.2
	Strike	45	13.3	24	9.4	69	11.6	38	17.1	21	13.2	59	15.4
	Post-Strike	40	13.8	22	8.7	62	11.4	27	16.0	21	14.5	48	15.3
Health Related	Pre-Strike	-	-	3	4.8	3	2.1	-	-	1	2.4	1	1.0
	Strike	9	2.7	20	7.8	29	4.8	4	1.7	8	5.0	12	3.2
	Post-Strike	13	4.5	29	11.4	42	7.7	3	1.8	6	4.1	9	2.9
Teachers' Strike	Pre-Strike	2	2.7	1	1.6	3	2.2	-	-	-	-	-	-
	Strike	91	26.9	55	21.7	146	24.6	31	14.0	27	16.8	58	15.1
	Post-Strike	36	12.5	28	11.0	64	11.8	24	14.2	19	13.1	43	13.7
Other (Marriage, travel)	Pre-Strike	1	1.3	2	3.2	3	2.2	2	3.4	2	4.8	4	4.0
	Strike	26	7.7	35	13.7	61	10.4	15	6.7	11	6.9	26	6.8
	Post-Strike	36	12.5	19	7.5	55	10.1	10	5.9	10	6.9	20	6.4
Total	Pre-Strike	75	100.0	63	100.0	138	100.0	58	100.0	41	100.0	99	100.0
	Strike	338	100.0	255	100.0	593	100.0	223	100.0	160	100.0	383	100.0
	Post-Strike	289	100.0	254	100.0	543	100.0	169	100.0	145	100.0	314	100.0
Chi square[1]	Pre-strike			11.56	d.f. = 6		n.s.s.		8.92	d.f. = 5		n.s.s.	
	Strike			20.88	d.f. = 6		p .01		5.70	d.f. = 5		n.s.s.	
	Post-Strike			9.47	d.f. = 6		n.s.s.		3.83	d.f. = 5		n.s.s.	
Chi square[2]				68.96	d.f. = 12		p .001		36.44	d.f.= 10		p .001	

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[1] Pertaining to the significance of the relationship between reason for leaving school and sex.

[2] Pertaining to the significance of the relationship between reason for leaving school and year of withdrawal.

TABLE II-15

PERCENTAGE DISTRIBUTION AND RANK ORDER OF IMPORTANCE FOR FIRST REASON BY SEX AND YEAR OF WITHDRAWAL

First Reason	Pre-Strike (N=138)				Strike (N=593)				Post-Strike (N=543)			
	Male		Female		Male		Female		Male		Female	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Employment	53.3	1	30.1	2	19.7	2	13.3	4	18.1	2	20.1	2
Financial	9.3	3	9.5	3	4.8	6	4.7	7	3.1	8	4.7	8.5
Economic	62.6		39.6		24.5		18.0		21.2		24.8	
Dissatisfaction with school	22.7	2	34.9	1	19.5	3	19.6	2	25.6	1	21.3	1
Dissatisfaction with teachers or teaching	4.0	5	7.9	4	1.8	9	3.9	9	6.2	6	6.7	7
Dissatisfaction with peers	-	9	-	10	0.6	10	1.6	10	2.0	9	4.7	8.5
Low achievement	6.7	4	6.4	5	13.3	4	9.4	5	13.8	3	8.7	5
School Related	33.4		49.2		35.2		34.5		47.6		41.4	
Home conditions	-	9	1.6	8.5	3.0	7	4.3	8	1.7	10	3.9	10
Health/Medical	-	9	4.8	6	2.7	8	7.8	6	4.5	7	11.4	3
Other (marriage, travel)	1.3	7	3.2	7	7.7	5	13.7	3	12.5	4.5	7.5	6
Personal	1.3		9.6		13.4		25.8		18.7		22.8	
Teachers' Strike	2.7	6	1.6	8.5	26.9	1	21.7	1	12.5	4.5	11.0	4
TOTAL	100.0		100.0		100.0		100.0		100.0		100.0	

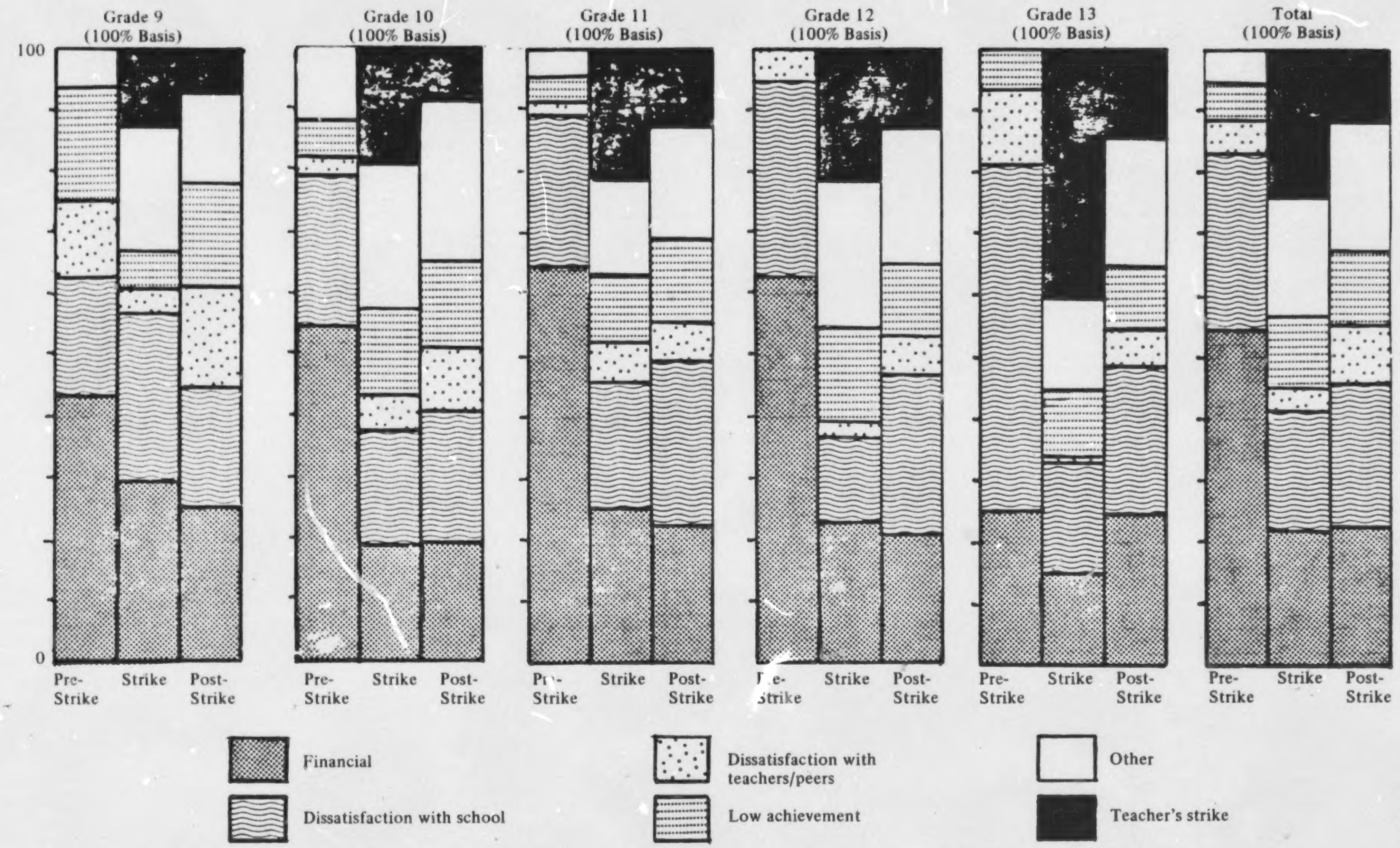

Figure II.d Distribution of Interviewees by First Reason for Leaving School, Grade Level and Year of Withdrawal (Based on Table II-16)

TABLE II-16

PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY FIRST REASON FOR LEAVING SCHOOL, GRADE AND YEAR OF WITHDRAWAL

Reason	Year Of Withdrawal	%	Grade					Total		Chi square[1] (d.f.=8)
			9	10	11	12	13	N	%	
Employment Related	Pre-Strike	%	43.7	42.4	55.7	47.3	18.7	58	45.0	
	Strike	%	22.1	16.3	20.9	17.4	11.0	100	17.4	
	Post-Strike	%	19.1	14.7	16.4	18.7	22.1	92	18.1	
Financial	Pre-Strike	%	-	12.1	8.9	15.8	6.3	12	9.3	
	Strike	%	7.4	2.9	4.1	5.2	3.9	26	4.5	
	Post-Strike	%	6.3	4.6	5.7	2.1	2.5	21	4.1	
Dissatisfaction with school	Pre-Strike	%	18.8	24.2	24.4	31.6	56.2	37	28.7	
	Strike	%	27.2	18.3	20.9	13.9	18.1	111	19.3	
	Post-Strike	%	19.1	21.0	27.1	26.0	23.8	121	23.8	
Dissatisfaction with teacher(s), or the teaching	Pre-Strike	%	12.5	3.0	2.2	5.3	12.5	7	5.4	
	Strike	%	1.2	3.8	4.7	2.6	.8	16	2.8	
	Post-Strike	%	11.1	9.2	4.1	4.2	5.1	32	6.3	
Dissatisfied with peers, or peer group influence	Pre-Strike	%	-	-	-	-	-	-	-	
	Strike	%	2.5	1.9	1.4	-	-	6	1.0	
	Post-Strike	%	4.8	5.5	2.5	2.1	.8	15	3.0	
Home conditions/ indifferent attitude of parents	Pre-Strike	%	-	-	2.2	-	-	1	.8	
	Strike	%	2.5	5.8	3.4	3.5	3.1	21	3.7	
	Post-Strike	%	-	2.8	4.9	3.1	2.5	15	3.0	
Low achievement	Pre-Strike	%	18.8	6.1	4.4	-	6.3	8	6.2	
	Strike	%	6.2	14.4	10.8	15.7	11.0	68	11.8	
	Post-Strike	%	17.5	10.1	13.1	11.5	10.2	61	12.0	
Health related	Pre-Strike	%	-	6.1	2.2	-	-	3	2.3	
	Strike	%	6.2	6.7	5.4	4.3	2.4	28	4.9	
	Post-Strike	%	7.9	5.5	7.4	12.5	4.2	37	7.3	
Teachers' strike	Pre-Strike	%	-	-	-	-	-	-	-	
	Strike	%	13.6	19.3	21.6	21.7	40.3	139	24.2	
	Post-Strike	%	7.9	9.2	13.1	13.5	14.4	61	12.0	
Other (marriage/ travel)	Pre-Strike	%	6.3	6.1	-	-	-	3	2.3	
	Strike	%	11.1	10.6	6.8	15.7	9.4	60	10.4	
	Post-Strike	%	6.3	17.4	5.7	6.3	14.4	53	10.4	
Total Respondents	Pre-Strike	N	16	33	45	19	16	129		15.26
		%	100.0	100.0	100.0	100.0	100.0		100.0	n.s.s.
	Strike	N	81	104	148	115	127	575	-	5.97
		%	100.0	100.0	100.0	100.0	100.0	-	100.0	n.s.s.
	Post-Strike	N	63	109	122	96	118	508	-	5.30
		%	100.0	100.0	100.0	100.0	100.0	-	100.0	n.s.s.

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[1] Pertaining to the significance of the relationship between reason for leaving and grade level.

TABLE II-17

THE THREE TOP RANKED FIRST REASONS BY GRADE AND YEAR OF WITHDRAWAL

Grade	Rank	Pre-Strike (N=132)		Strike (N=575)		Post-Strike (N=508)	
		Reason	%	Reason	%	Reason	%
9	1	Employment	43.7	Dissatisfaction with school	27.2	Dissatisfaction with school	(19.1)
	2	Dissatisfaction with school	18.8	Employment	22.1	Employment	(19.1)
	3	Low achievement	18.8	Teachers' Strike	13.6	Low achievement	17.5
	4	Dissatisfaction with teachers	12.5			Dissatisfaction with teachers	11.1
10	1	Employment	42.4	Teachers' Strike	19.3	Dissatisfaction with school	21.0
	2	Dissatisfaction with school	24.2	Dissatisfaction with school	18.3	Other (marriage, travel)	17.4
	3	Financial	12.1	Employment	16.3	Employment	14.7
11	1	Employment	55.7	Teachers' strike	21.6	Dissatisfaction with school	27.1
	2	Dissatisfaction with school	24.4	Dissatisfaction with school	(20.9)	Employment	16.4
	3	Financial	8.9	Employment	(20.9)	Low achievement	(13.1)
	4			Low achievement	10.8	Teachers' strike	(13.1)
12	1	Employment	47.3	Teachers' strike	21.7	Dissatisfaction with school	26.0
	2	Dissatisfaction with school	31.6	Employment	17.4	Employment	18.7
	3	Financial	15.8	Low achievement	(15.7)	Teachers' strike	13.5
				Other	(15.7)		
13	1	Dissatisfaction with school	56.2	Teachers' strike	24.2	Dissatisfaction with school	23.8
	2	Employment	18.7	Dissatisfaction with school	19.3	Employment	18.1
	3	Dissatisfaction with teachers	12.8	Employment	17.4	Low achievement	(12.0)
						Teachers' strike	(12.0)

TABLE II-18

PERCENTAGE DISTRIBUTION AND RANK ORDER OF IMPORTANCE FOR SECOND REASON BY SEX AND YEAR OF WITHDRAWAL

Second Reason	Pre-Strike				Strike				Post-Strike			
	Male		Female		Male		Female		Male		Female	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Employment	1.7	7	7.3	5.5	15.7	3	19.4	1	11.2	5	8.3	5
Financial	27.7	2	7.3	5.5	12.1	5	8.8	5	8.3	6	6.2	7
Economic	29.4		14.6		27.8		28.2		19.5		14.5	
Dissatisfaction with school	31.1	1	41.6	1	20.7	1	16.2	3	25.4	1	25.6	1
Dissatisfaction with teachers or their teaching	12.1	4	9.8	3	8.2	6	7.5	6	12.4	4	12.4	4
Dissatisfaction with peers	-	9	9.7	4	1.7	9.5	1.9	10	2.4	8.5	3.4	10
Low achievement	18.9	3	14.7	2	17.1	2	13.2	4	16.0	2	14.5	2
School Related	62.1		75.8		47.7		38.8		56.2		55.9	
Home conditions	5.1	5	2.4	8.5	2.1	8	4.3	9	2.4	8.5	5.5	8
Health/medical	-	9	2.4	8.5	1.7	9.5	5.0	8	1.8	10	4.1	9
Other (marriage, travel)	3.4	6	4.8	7	6.7	7	6.9	7	5.9	7	6.9	6
Personal	8.5		9.6		10.5		16.2		10.1		16.5	
Teachers' Strike	-	9	-	10	14.0	4	16.8	2	14.2	3	13.1	3
TOTAL	100.0		100.0		100.0		100.0		100.0		100.0	

TABLE II-19

THE THREE TOP RANKED SECOND REASONS BY GRADE AND YEAR OF WITHDRAWAL

Grade	Rank	Pre-Strike (N=94)		Strike (N=370)		Post-Strike (N=295)	
		Reason	%	Reason	%	Reason	%
9	1	Dissatisfaction with school	55.6	Dissatisfaction with school	21.9	Dissatisfaction with school	(20.0)
	2	Financial	22.2	Teachers' strike	14.6	Low achievement	(20.0)
	3	Low achievement	11.1	Financial	14.5	Dissatisfaction with teachers	17.1
	4	Home conditions	11.1			Teachers' strike	11.5
10	1	Dissatisfaction with school	32.0	Low achievement Teachers' strike	(18.5) (18.5)	Dissatisfaction with school	30.2
	2	Low achievement	24.0	Dissatisfaction with school	14.9	Dissatisfaction with teachers	14.5
	3	Dissatisfaction with teachers	16.0	Dissatisfaction with teachers	11.1	Low achievement	14.3
11	1	Dissatisfaction with school	32.4	Low achievement	20.0	Dissatisfaction with school	26.0
	2	Financial	20.6	Dissatisfaction with school	18.8	Low achievement	22.0
	3	Dissatisfaction with teachers	17.6	Teachers' strike	12.7	Dissatisfaction with teachers	18.2
12	1	Dissatisfaction with school	40.0	Teachers' strike	19.6	Dissatisfaction with school	24.2
		Financial	20.0	Employment	18.2	Teachers' strike	15.5
				Dissatisfaction with school	15.2	Low achievement	12.1
						Financial	12.1
13	1.5	Dissatisfaction with school	27.3	Dissatisfaction with school	23.3	Dissatisfaction with school	13.7
	1.5	Low achievement	27.3	Employment	23.3	Teachers' strike	20.3
	3	Financial	18.1	Low achievement	16.5	Employment	15.9
				Teachers' strike	13.7		

TABLE II-20

PERCENTAGE DISTRIBUTION AND RANK ORDER OF SECOND REASON FOR LEAVING SCHOOL BY YEAR OF WITHDRAWAL

Reason	Pre-strike (N=99)		Strike (N=383)		Post-strike (N=314)	
	%	Rank	%	Rank	%	Rank
Employment	4.0	65	17.2	2	9.9	5
Financial	19.2	2	10.6	5	7.3	6
Economic	23.2		27.8		17.2	
Dissatisfaction with school	35.5	1	18.8	1	25.5	1
Dissatisfaction with teachers or their teaching	11.1	4	7.9	6	12.4	4
Dissatisfaction with peers	4.0	6.5	1.9	10	2.9	9.5
Low achievement	17.2	3	15.4	3	15.3	2
School Related	67.8		44.0		56.1	
Home condition(s)	4.0	6.5	[illegible].1	9	3.7	8
Health/medical	1.0	9	3.2	8	2.9	9.5
Other (marriage, travel)	4.0	6.5	6.8	7	6.4	7
Personal	9.0		13.1		13.0	
Teachers' strike	-	10	15.1	4	13.7	3
TOTAL	100.0		100.0		100.0	

TABLE II-21

PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY SECOND REASON FOR LEAVING SCHOOL, GRADE AND YEAR OF WITHDRAWAL

Second Reason	Year Of Withdrawal	%	Grade					Total	
			9	10	11	12	13	N	%
Employment Related	Pre-Strike	%	-	-	8.8	6.7	-	4	4.3
	Strike	%	12.7	13.6	17.9	18.2	23.3	64	17.3
	Post-Strike	%	11.4	7.1	7.8	6.9	15.9	29	9.8
Financial	Pre-Strike	%	22.2	12.0	20.6	20.0	18.1	17	18.0
	Strike	%	14.5	7.4	9.5	12.1	9.6	58	10.3
	Post-Strike	%	5.7	7.1	2.6	12.1	8.7	21	7.1
Dissatisfaction with School	Pre-Strike	%	55.6	32.0	32.4	39.9	27.3	33	35.1
	Strike	%	21.9	14.9	18.8	15.2	23.3	69	18.7
	Post-Strike	%	20.0	30.2	26.0	24.2	27.6	77	26.1
Dissatisfaction with Teacher(s), or the teaching	Pre-Strike	%	-	16.0	17.6	-	9.1	11	11.7
	Strike	%	7.3	11.1	10.5	6.1	2.7	29	7.8
	Post-Strike	%	17.1	14.5	18.2	6.9	5.8	36	12.2
Dissatisfied with peers, or peer group influence	Pre-Strike	%	-	4.0	2.9	6.7	9.1	4	4.3
	Strike	%	3.6	1.2	1.1	1.5	2.7	7	1.9
	Post-Strike	%	8.6	3.6	2.6	3.4	-	9	3.1
Home condition(s)/ indifferent attitude of parents	Pre-Strike	%	11.1	4.0	2.9	-	9.1	4	4.3
	Strike	%	3.6	4.9	1.1	7.6	-	12	3.2
	Post-Strike	%	-	5.4	3.9	5.2	2.9	11	3.7
Low achievement	Pre-Strike	%	11.1	24.0	11.8	13.3	27.3	16	17.0
	Strike	%	7.3	18.5	20.0	9.1	16.5	56	15.1
	Post-Strike	%	20.0	14.3	22.0	12.1	13.0	48	16.3
Health Related	Pre-Strike	%	-	-	-	6.7	-	1	1.0
	Strike	%	1.8	7.4	2.1	4.5	-	12	3.2
	Post-Strike	%	-	3.6	2.6	3.4	2.9	8	2.7
Teachers' strike	Pre-Strike	%	-	-	-	-	-	-	-
	Strike	%	14.6	18.5	12.7	19.6	13.7	58	15.7
	Post-Strike	%	11.5	7.1	11.7	15.5	20.3	40	13.6
Other (marriage travel)	Pre-Strike	%	-	8.0	2.9	6.7	-	4	4.3
	Strike	%	12.7	2.5	6.3	6.1	8.2	25	6.8
	Post-Strike	%	5.7	7.1	2.6	10.3	2.9	16	5.4
Total Respondents	Pre-Strike	N	9	25	34	15	11	94	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
	Strike	N	55	81	95	66	73	370	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
	Post-Strike	N	35	56	77	58	69	295	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
Chi square[1] (d.f. = 8)	Pre-Strike			3.52	n.s.s.				
	Strike			10.16	n.s.s.				
	Post-Strike			14.83	n.s.s.				

[1] Pertaining to the significance of the relationship between reason for leaving and grade level.

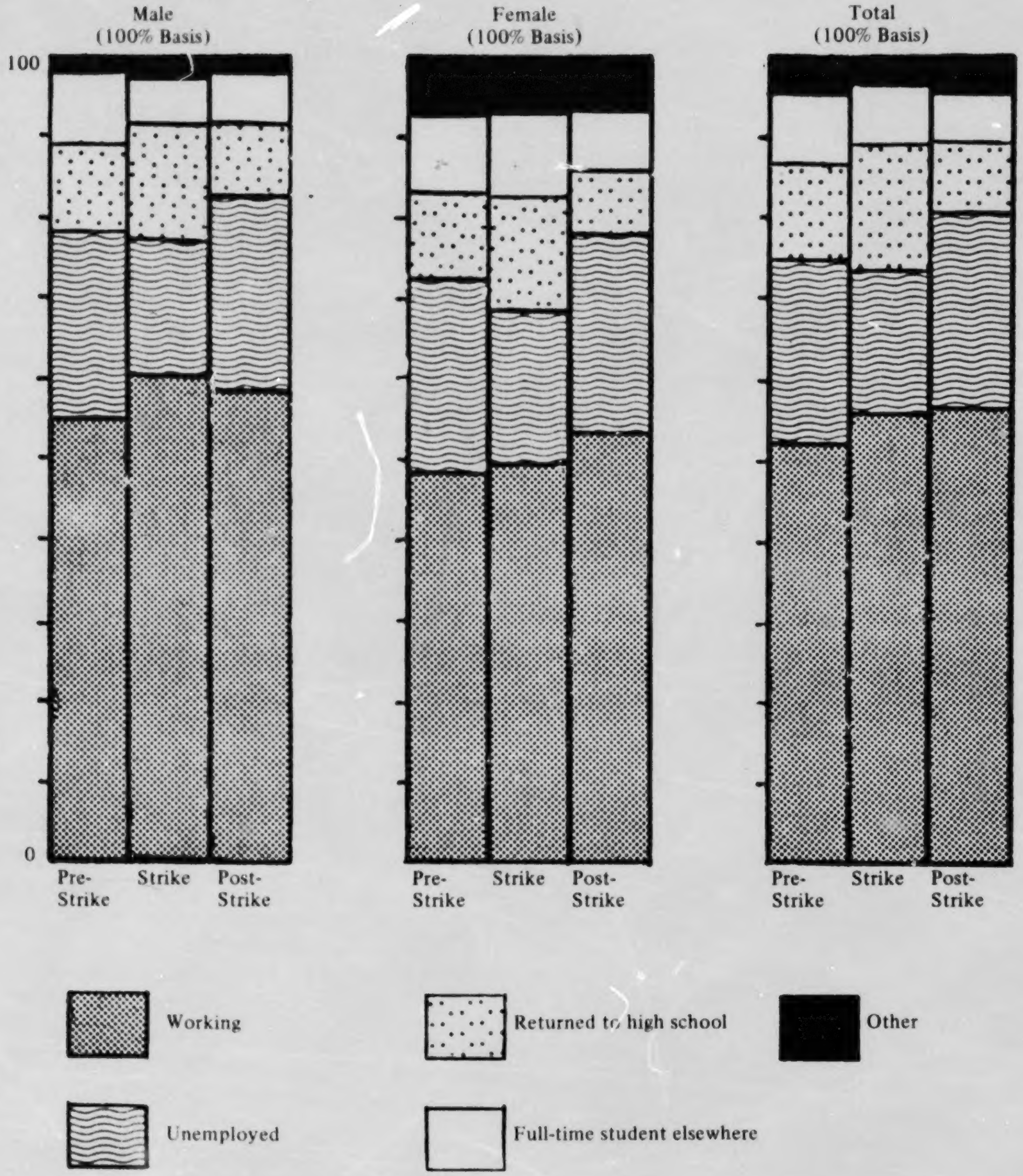

Figure II.e Distribution of Interviewees by Destination, Sex and Year of Withdrawal (Based on Table II.22)

TABLE II-22

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY DESTINATION, SEX AND YEAR OF WITHDRAWAL

Destination	Year of Withdrawal	Male		Female		Total		Chi square[1]
		N	%	N	%	N	%	
Returned to High School	Pre-strike	9	11.5	7	10.6	16	11.1	
	Strike	57	16.7	34	13.3	91	15.2	
	Post-Strike	25	8.6	20	7.9	45	8.3	
Full-time student elsewhere	Pre-Strike	7	9.0	6	9.1	13	9.0	
	Strike	18	5.3	26	10.2	44	7.4	
	Post-Strike	18	6.3	19	7.5	37	6.8	18.56
Working	Pre-Strike	43	55.1	32	48.5	75	52.1	
	Strike	207	60.4	127	49.6	334	55.9	
	Post-Strike	169	58.7	136	53.8	305	56.5	d.f.=8
Unemployed	Pre-Strike	18	23.1	16	24.2	34	23.6	$p \leq .05$
	Strike	57	16.7	50	19.5	107	17.9	
	Post-Strike	69	24.0	61	24.1	130	24.0	
Other (married, travelling, etc.)	Pre-Strike	1	1.3	5	7.6	6	4.2	
	Strike	3	.9	19	7.4	22	3.7	
	Post-Strike	7	2.4	17	6.7	24	4.4	
Total	Pre-Strike	78	100.0	66	100.0	144	100.0	
	Strike	342	100.0	256	100.0	598	100.0	
	Post-Strike	288	100.0	253	100.0	541	100.0	
Chi square[2] (d.f.= 4)	1974-75	3.75				n.s.s.		
	1975-76	26.71				$p \leq .001$		
	1976-77	71.91				$p \leq .001$		

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[1] Pertaining to the significance of the relationship between destination and year of withdrawal.

[2] Pertaining to the significance of the relationship between destination and sex.

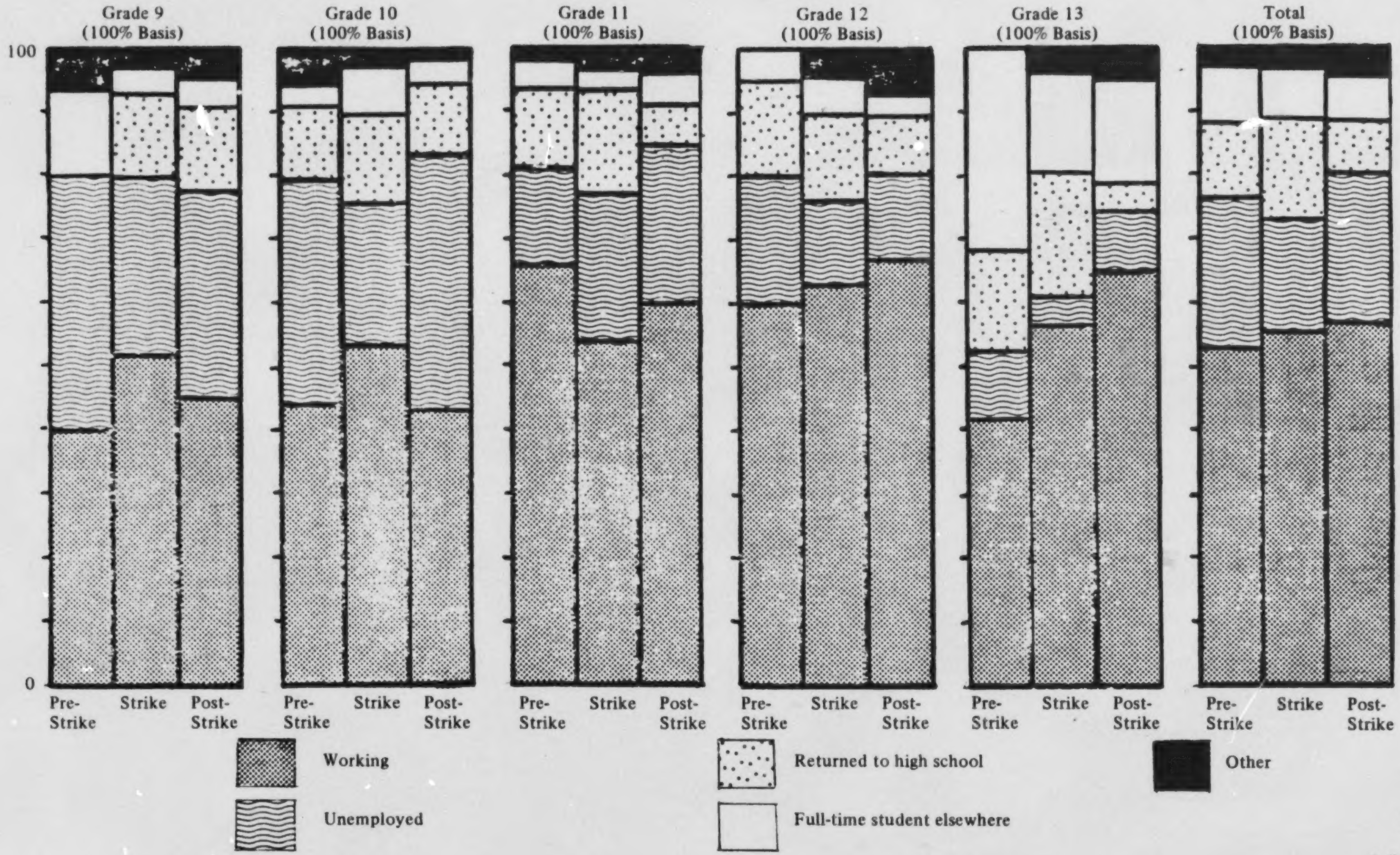

Figure II.f Distribution of Interviewees by Destination, Grade Level and Year of Withdrawal (Based on Table II-23)

TABLE II-23

PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY GRADE, YEAR OF WITHDRAWAL AND DESTINATION

Destination	Year Of Withdrawal	%	Grade					Total	
			9	10	11	12	13	N	%
Returned to high school	Pre-Strike	%	-	11.8	12.8	15.0	15.8	16	11.9
	Strike	%	13.3	13.6	16.7	13.8	19.5	91	15.7
	Post-Strike	%	12.9	11.0	6.6	9.4	4.3	42	8.3
Studying full-time elsewhere	Pre-Strike	%	13.3	2.9	4.3	5.0	31.6	12	8.8
	Strike	%	3.6	7.8	3.3	6.0	15.6	43	7.4
	Post-Strike	%	4.8	3.7	4.9	3.1	16.2	35	6.9
Working	Pre-Strike	%	40.0	44.1	66.0	60.0	42.1	72	53.3
	Strike	%	51.8	53.4	54.0	63.0	54.7	322	55.5
	Post-Strike	%	45.2	43.1	59.8	66.7	65.0	288	56.9
Unemployed	Pre-Strike	%	40.0	35.3	14.9	20.0	10.5	31	23.0
	Strike	%	27.7	22.3	22.7	12.9	6.3	103	17.8
	Post-Strike	%	32.3	40.4	24.6	13.5	9.4	118	23.4
Other	Pre-Strike	%	6.7	5.9	2.0	-	-	4	3.0
	Strike	%	3.6	2.9	3.3	4.3	3.9	21	3.6
	Post-Strike	%	4.8	1.8	4.0	7.3	5.1	23	4.5
Total Respondents	Pre-Strike	N	15	34	47	20	19	135	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
	Strike	N	83	103	150	116	128	580	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
	Post-Strike	N	62	109	122	96	117	506	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
Chi Square[1] (d.f.=16)	Pre-Strike			29.23		$p \leq .05$			
	Strike			39.92		$p < .001$			
	Post-Strike			66.08		$p < .001$			

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[1] Pertaining to the significance of the relationship between destination and grade level.

TABLE II-24

PATTERN[1] OF CHANGE IN DESTINATION COMBINING SEX AND GRADE LEVEL DISTRIBUTIONS TOGETHER

Pattern of Change	Observed 0	Expected E	0-E	(0-E)	$\frac{(0-E)^2}{E}$
A. ∧ Increased from pre-strike to strike and then decreased in the post-strike year.	12	8.75	3.25	10.5625	1.207
B. ∨ Decreased from pre-strike to strike year and then increased in the post-strike year.	15	8.75	6.25	39.0625	4.464
C. / Consistently increased from the pre-strike through the post-strike year	6	8.75	-2.75	7.5625	.864
D. \ Consistently decreased from the pre-strike through the post-strike year.	2	8.75	-6.75	45.5625	5.207
Total	35	35	0		11.742
Chi square = 11.742	d.f. = 3		p .01		

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[1] Based on Table II.25

Two main patterns of change were identified:

Pattern A (∧) was the dominant pattern for those who returned to high school. This was true of both sexes and the 10th, 11th and 13th graders of this destination group. This pattern was also dominant for those who were working but only for male respondents; and the 9th, 10th and 12th graders.

Pattern B (∨) was the dominant pattern for the remaining three destination categories (i.e. "studying full-time","unemployed" and "other"). It was true of both sexes except for females who were studying full-time. By grade level also, this pattern predominated for those who were either studying full-time (grades 9, 10 and 13) or unemployed (grades 9, 10, 12, and 13).

TABLE II-25

PATTERN OF CHANGE IN DESTINATION BY SEX AND YEAR OF WITHDRAWAL (BASED ON TABLES II-22 AND II-23)

Destination	Sex						Grade Level														
	Male			Female			Grade 9			Grade 10			Grade 11			Grade 12			Grade 13		
	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post-Str.	Pre-Str.	Str.	Post Str.
1. Returned to High School	11.5	16.7	8.6	10.0	13.3	7.9		13.3	12.9	11.8	13.6	11.0	12.8	16.7	6.6	15.0	13.8	9.4	15.8	19.5	4.3
2. Studying Full-time elsewhere	19.0	5.3	6.3	9.1	10.2	7.5	13.3	3.6	4.8	2.9	7.8	3.7	4.3	3.3	4.9	5.0	6.0	3.1	31.6	15.6	16.2
3. Working	55.1	60.4	58.7	48.5	49.6	53.8	40.8	51.8	45.2	44.1	53.4	43.1	66.0	66.0 54.0	59.8	60.0	63.0	66.7	42.1	54.7	65.0
4. Unemployed	23.1	16.7	24.0	24.2	19.5	24.1	40.0	27.7	32.3	35.3	22.3	40.4	14.9	22.7	24.6	20.0	12.9	13.5	10.5	6.3	9.4
5. Other	1.3	.9	2.4	7.6	7.4	6.7	6.7	3.6	4.8	5.9	2.9	1.8	2.0	3.3	4.0		4.3	7.3	3.9		5.1

TABLE II-26

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY SEX, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Did you discuss your plans to leave school with your parents?"

Response	Year Of Withdrawal	Male		Female		Total		Chi Square[1]
		N	%	N	%	N	%	
Yes	Pre-Strike	49	62.0	50	78.1	99	69.2	8.36 (d.f.=2) $p \leq .05$
	Strike	252	71.4	200	78.1	452	74.2	
	Post-Strike	188	64.4	173	68.9	361	66.5	
No	Pre-Strike	30	38.0	14	21.9	44	30.8	
	Strike	101	28.6	56	21.9	157	25.8	
	Post-Strike	104	35.6	78	31.1	182	33.5	
Total Respondents	Pre-Strike	79	100.0	64	100.0	143	100.0	
	Strike	353	100.0	256	100.0	609	100.0	
	Post-Strike	292	100.0	251	100.0	543	100.0	
Chi square[2] (d.f.=1)	Pre-Strike	4.30		$p \leq .05$				
	Strike	3.52		n.s.s.				
	Post-Strike	1.25		n.s.s.				

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[1] Pertaining to the significance of the relationship between item response and year of withdrawal.

[2] Pertaining to the significance of the relationship between item response and sex.

TABLE II-27

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY GRADE, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Did you discuss your plans to leave school with your parents?"

Response	Year Of Withdrawal	Grade 9 N	Grade 9 %	Grade 10 N	Grade 10 %	Grade 11 N	Grade 11 %	Grade 12 N	Grade 12 %	Grade 13 N	Grade 13 %	Total N	Total %
Yes	Pre-Strike	10	52.5	20	58.8	36	78.3	17	81.0	13	72.2	96	71.1
	Strike	53	64.6	68	67.3	111	77.6	88	80.7	93	75.0	413	73.9
	Post-Strike	44	73.3	74	69.8	74	62.7	59	62.1	77	67.5	328	66.5
No	Pre-Strike	6	37.5	14	41.2	10	21.7	4	19.0	5	27.8	39	28.9
	Strike	29	35.4	33	32.7	32	22.4	21	19.3	31	25.0	146	26.1
	Post-Strike	16	26.7	32	30.2	44	37.3	36	37.9	37	32.5	165	33.5
Total Respondents	Pre-Strike	16	100.0	34	100.0	46	100.0	21	100.0	18	100.0	135	100.0
	Strike	82	100.0	101	100.0	143	100.0	109	100.0	124	100.0	559	100.0
	Post-Strike	60	100.0	106	100.0	118	100.0	95	100.0	114	100.0	493	100.0
Chi square[1] (d.f. = 4)	Pre-Strike			5.22		N.S.S.							
	Strike			9.65		$P \leq .05$							
	Post-Strike			3.42		n.s.s.							

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[1] Pertaining to the significance of the relationship between item response and grade level.

TABLE II-28

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY YEAR OF WITHDRAWAL, DESTINATION GROUPING AND RESPONSE TO ITEM:

"Did you discuss your plans to leave school with your parents?"

Response	Year Of Withdrawal	Destination Grouping				Total	
		Full-Time Students		Others[1]			
		N	%	N	%	N	%
Yes	Pre-Strike	16	61.5	83	70.9	99	69.2
	Strike	106	78.5	323	72.6	429	74.0
	Post-Strike	50	66.7	302	65.9	352	66.0
No	Pre-Strike	10	38.5	34	29.1	44	30.8
	Strike	29	21.5	122	27.4	151	26.0
	Post-Strike	25	33.3	156	34.1	181	34.0
Total Respondents	Pre-Strike	26	100.0	117	100.0	143	100.0
	Strike	135	100.0	445	100.0	580	100.0
	Post-Strike	75	100.0	458	100.0	553	100.0
Chi Square[2] (d.f.=1)	Pre-Strike		.88	n.s.s.			
	Strike		1.89	n.s.s.			
	Post-Strike		.02	n.s.s.			

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[1] Including those working, unemployed and others who were not studying full-time.

[2] Pertaining to the significance of the relationship between item response and destination grouping.

TABLE II-29

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY PARENTS' REACTION TO THEIR PLANS TO LEAVE SCHOOL, SEX AND YEAR OF WITHDRAWAL

Parents' Reaction	Year Of Withdrawal	Male N	Male %	Female N	Female %	Total N	Total %	Chi Square[1]
Approval	Pre-Strike	13	22.1	11	21.1	24	21.6	
	Strike	51	20.2	52	26.0	103	22.8	
	Post-Strike	33	17.6	52	30.1	85	23.5	
"Said I was old enough to decide for myself"	Pre-Strike	14	23.7	15	28.8	29	26.1	15.24
	Strike	96	38.1	77	38.5	173	38.3	
	Post-Strike	72	38.3	48	27.7	120	33.2	(d.f. = 8)
"No reaction-neutral"	Pre-Strike	3	5.1	3	5.8	6	5.4	n.s.s.
	Strike	11	4.4	8	4.0	19	4.2	
	Post-Strike	8	4.3	7	4.1	15	4.2	
"They were disappointed"	Pre-Strike	14	23.7	11	21.2	25	22.6	
	Strike	35	13.9	29	14.5	64	14.2	
	Post-Strike	42	22.3	36	20.8	78	21.6	
"Strongly opposed to my leaving"	Pre-Strike	12	20.3	9	17.3	21	18.9	
	Strike	44	17.5	18	9.0	62	13.7	
	Post-Strike	27	14.4	17	9.8	44	12.2	
Other	Pre-Strike	3	5.1	3	5.8	6	5.4	
	Strike	15	5.9	16	8.0	31	6.8	
	Post-Strike	6	3.1	13	7.5	19	5.3	
Total Respondents	Pre-Strike	59	100.0	52	100.0	111	100.0	
	Strike	252	100.0	200	100.0	452	100.0	
	Post-Strike	188	100.0	173	100.0	361	100.0	
Chi square[2] (d.f.=4)	Pre-Strike		.55		n.s.s.			
	Strike		.76		n.s.s.			
	Post-Strike		12.24		$P \leq .05$			

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[1] Pertaining to the significance of the relationship between parents reaction and year of withdrawal.

[2] Pertaining to the significance of the relationship between parents' reaction and sex.

TABLE II-30

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY PARENTS' REACTION TO THEIR PLANS TO LEAVE SCHOOL, GRADE AND YEAR OF WITHDRAWAL

Parents' Reaction	Year Of Withdrawal	%	Grade					Total	
			9	10	11	12	13	N	%
Approval	Pre-Strike	%	20.0	13.0	30.0	27.8	20.0	25	23.5
	Strike	%	21.4	23.9	18.5	30.9	21.6	101	23.1
	Post-Strike	%	34.1	21.9	21.7	29.0	18.8	82	23.9
"Said I was old enough to decide for myself"	Pre-Strike	%	10.0	13.0	30.0	27.8	33.3	26	24.5
	Strike	%	35.7	33.8	43.7	35.1	39.2	167	38.2
	Post-Strike	%	18.2	27.4	38.6	32.2	36.2	109	31.9
"No reaction-neutral"	Pre-Strike	%	20.0	4.3	7.5	-	-	6	5.7
	Strike	%	3.6	2.8	4.2	7.4	2.1	18	4.1
	Post-Strike	%	4.5	1.4	4.8	6.5	5.0	15	4.4
"They were disappointed"	Pre-Strike	%	20.0	30.5	17.5	16.7	26.7	23	21.7
	Strike	%	16.1	12.7	11.8	11.7	19.6	62	14.2
	Post-Strike	%	22.7	26.0	22.9	19.4	18.8	75	21.9
"Strongly opposed to my leaving"	Pre-Strike	%	10.0	34.9	12.5	16.7	20.0	20	18.9
	Strike	%	16.1	18.3	15.1	5.3	13.4	58	13.3
	Post-Strike	%	20.5	13.7	7.2	8.1	15.0	42	12.3
Other	Pre-Strike	%	20.0	4.3	2.5	11.0	-	6	5.7
	Strike	%	7.1	8.5	6.7	9.6	4.1	31	7.1
	Post-Strike	%	-	9.6	4.8	4.8	6.2	19	5.6
Total Respondents	Pre-Strike	N	10	23	40	18	15	106	
		%	100.0	100.0	100.0	100.0	100.0		100.0
	Strike	N	56	71	119	94	97	437	
		%	100.0	100.0	100.0	100.0	100.0		100.0
	Post-Strike	N	44	73	83	62	80	342	
		%	100.0	100.0	100.0	100.0	100.0		100.0
Chi square[1] (d.f.=16)	Pre-Strike			27.04	$p \leq .05$				
	Strike			20.03	n.s.s.				
	Post-Strike			16.11	n.s.s.				

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[1] Pertaining to the significance of the relationship between parents' reaction and grade level

TABLE II-31

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY PARENTS' REACTION TO THEIR PLANS TO LEAVE SCHOOL, YEAR OF WITHDRAWAL AND DESTINATION GROUPING

Parents' Reaction	Year Of Withdrawal	Destination Grouping				Total	
		Full-time Students		Others[1]			
		N	%	N	%	N	%
Approval	Pre-Strike	6	33.3	18	19.4	24	21.6
	Strike	38	30.9	66	19.8	104	22.8
	Post-Strike	24	47.0	64	20.3	88	24.0
"Said I was old enough to decide for myself"	Pre-Strike	5	27.8	24	25.7	29	26.1
	Strike	43	34.9	133	40.0	176	38.6
	Post-Strike	13	25.5	107	34.0	120	32.8
"No reaction-neutral"	Pre-Strike	-	-	6	6.5	6	5.4
	Strike	5	4.1	14	4.2	19	4.2
	Post-Strike	1	2.0	14	4.4	15	4.1
"They were disappointed"	Pre-Strike	3	16.7	22	23.6	25	22.6
	Strike	15	12.2	49	14.7	64	14.0
	Post-Strike	6	11.8	74	23.5	80	21.9
"Strongly opposed to my leaving"	Pre-Strike	4	22.2	17	18.3	21	18.9
	Strike	17	13.8	45	13.5	62	13.6
	Post-Strike	4	7.8	40	12.7	44	12.0
Other	Pre-Strike	-	-	6	6.5	6	5.4
	Strike	5	4.1	26	7.8	31	6.8
	Post-Strike	3	5.9	16	5.1	19	5.2
Total Respondents	Pre-Strike	18	100.0	93	100.0	111	100.0
	Strike	123	100.0	333	100.0	456	100.0
	Post-Strike	51	100.0	315	100.0	366	100.0
Chi Square[2] (d.f.=4)	Pre-Strike		4.16	n.s.s.			
	Strike		7.05	n.s.s.			
	Post-Strike		17.77	$P \leq .01$			

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[1] Including those working, unemployed and others who were not studying full-time.

[2] Pertaining to the significance of the relationship between parents' reaction and destination grouping.

TABLE II-32

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY REASON FOR NOT DISCUSSING PLANS TO LEAVE SCHOOL WITH PARENTS, SEX AND YEAR OF WITHDRAWAL

Reason	Year Of Withdrawal	Male		Female		Total		Chi Square[1]
		N	%	N	%	N	%	
"Parents always wanted me to leave school"	Pre-Strike	3	10.0	1	7.1	4	9.1	
	Strike	9	9.2	1	1.9	10	6.7	
	Post-Strike	2	2.2	2	2.9	4	2.5	4.62
"They were indifferent to my schooling"	Pre-Strike	6	20.0	-	-	6	13.6	(d.f.=4)
	Strike	10	10.2	9	17.3	19	12.7	
	Post-Strike	13	14.6	11	15.7	24	15.1	n.s.s.
Other	Pre-Strike	21	70.0	13	92.9	34	77.3	
	Strike	79	80.6	42	80.8	121	80.6	
	Post-Strike	74	83.2	57	81.4	131	82.4	
Total Respondents	Pre-Strike	30	100.0	14	100.0	44	100.0	
	Strike	98	100.0	52	100.0	150	100.0	
	Post-Strike	89	100.0	70	100.0	159	100.0	
Chi square[2] (d.f.=2)	Pre-Strike	3.53		n.s.s.				
	Strike	4.04		n.s.s.				
	Post-Strike	.10		n.s.s.				

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[1] Pertaining to the significance of the relationship between reason for not discussing plans to leave school with parents and year of withdrawal.

[2] Pertaining to the significance of the relationship between reason for not discussing plans to leave school with parents and sex.

TABLE II-33

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY REASON FOR NOT DISCUSSING PLANS TO LEAVE SCHOOL WITH PARENTS, GRADE AND YEAR OF WITHDRAWAL

Reason	Year of Withdrawal	Grade										Total	
		9		10		11		12		13			
		N	%	N	%	N	%	N	%	N	%	N	%
"Parents always wanted me to leave anyway"	Pre-strike	1	16.7	-	-	2	20.0	-	-	1	20.0	4	10.0
	Strike	1	3.6	-	-	4	10.5	5	21.7	-	-	10	6.8
	Post-strike	1	7.1	-	-	1	2.7	1	3.2	-	-	3	2.1
"They were indifferent to my schooling"	Pre-strike	2	33.3	2	14.3	1	10.0	1	20.0	-	-	6	15.0
	Strike	3	10.7	4	13.8	7	18.4	4	17.4	1	3.4	19	12.9
	Post-strike	2	14.3	6	20.0	6	16.2	7	22.6	2	6.5	23	16.1
Other	Pre-strike	3	50.0	12	85.7	7	70.0	4	80.0	4	80.0	30	75.0
	Strike	24	85.7	25	86.2	27	71.1	14	60.9	28	96.6	118	80.3
	Post-strike	11	78.6	24	80.0	30	81.1	23	74.2	29	93.5	117	81.8
Total Respondents	Pre-strike	6	100.0	14	100.0	10	100.0	5	100.0	5	100.0	40	100.0
	Strike	28	100.0	29	100.0	38	100.0	23	100.0	29	100.0	147	100.0
	Post-strike	14	100.0	30	100.0	37	100.0	31	100.0	31	100.0	143	100.0
Chi square (d.f.=8)	Pre-strike	6.80 n.s.s.											
	Strike	18.74 p .05											
	Post-strike	6.92 n.s.s.											

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[1] Pertaining to the signficance of the relationship between reason for not discussing plans to leave school with parents and grade level.

TABLE II-34

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY REASON FOR NOT DISCUSSING PLANS TO LEAVE SCHOOL WITH PARENTS, YEAR OF WITHDRAWAL AND DESTINATION GROUPING

Reason	Year Of Withdrawal	Destination Grouping				Total	
		Full-time Students		Others[1]			
		N	%	N	%	N	%
"Parents always wanted me to leave"	Pre-Strike	2	16.7	2	6.3	4	9.1
	Strike	9	24.3	2	1.7	11	7.2
	Post-Strike	2	7.4	2	1.5	4	2.5
"They were indifferent to my schooling"	Pre-Strike	8	66.6	6	18.8	14	31.8
	Strike	3	8.1	17	14.8	20	13.2
	Post-Strike	-	-	25	18.8	25	15.6
Other	Pre-Strike	2	16.7	24	74.9	26	59.1
	Strike	25	67.6	96	83.5	121	79.6
	Post-Strike	25	92.6	106	79.7	131	81.9
Total Respondents	Pre-Strike	12	100.0	32	100.0	44	100.0
	Strike	37	100.0	115	100.0	152	100.0
	Post-Strike	27	100.0	133	100.0	160	100.0
Chi Square[2] (d.f.=2)	Pre-Strike			12.37	$p \leq .01$		
	Strike			21.57	$p \leq .001$		
	Post-Strike			8.66	$p \leq .02$		

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[1] Including those working, unemployed and others who were not studying full-time.

[2] Pertaining to the significance of the relationship between reason and destination grouping.

TABLE II-35

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES STUDYING FULL-TIME BY SEX, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Did anyone at your school have any influence in your deciding to leave school?"

Response	Year of Withdrawal	Male N	Male %	Female N	Female %	Total N	Total %	Chi Square[1]
Yes	Pre-Strike	2	13.3	1	10.0	3	12.0	
	Strike	14	18.9	9	15.0	23	17.2	
	Post-Strike	12	30.8	10	26.3	22	28.6	5.13
No	Pre-Strike	13	86.7	9	90.0	22	88.0	(d.f.=2)
	Strike	60	81.1	51	85.0	111	82.8	
	Post-Strike	27	69.2	28	73.7	55	71.4	n.s.s.
Total Respondents	Pre-Strike	15	100.0	10	100.0	25	100.0	
	Strike	74	100.0	60	100.0	134	100.0	
	Post-Strike	39	100.0	38	100.0	77	100.0	
Chi square[2] (d.f.=1)	Pre-Strike		.06	n.s.s.				
	Strike		.36	n.s.s.				
	Post-Strike		.10	n.s.s.				

[1] Pertaining to the significance of the relationship between item response and year of withdrawal.

[2] Pertaining to the significance of the relationship between item response and sex.

TABLE II-36

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES STUDYING FULL-TIME BY GRADE, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Did anyone at your school have any influence in your deciding to leave school?"

Response	Year Of Withdrawal	Grade										Total	
		9		10		11		12		13			
		N	%	N	%	N	%	N	%	N	%	N	%
Yes	Pre-Strike	-	-	-	-	-	-	2	50.0	-	-	2	7.7
	Strike	5	35.7	5	23.8	5	16.7	3	13.0	5	11.1	23	17.3
	Post-Strike	-	-	6	42.9	4	28.6	3	25.0	8	32.3	21	28.8
No	Pre-Strike	1	100.0	6	100.0	7	100.0	2	50.0	8	100.0	24	92.3
	Strike	9	64.3	16	76.2	25	83.3	20	87.0	40	88.9	110	82.7
	Post-Strike	9	100.0	8	57.1	10	71.4	9	75.0	16	66.7	52	71.2
Total Respondents	Pre-Strike	1	100.0	6	100.0	7	100.0	4	100.0	8	100.0	26	100.0
	Strike	14	100.0	21	100.0	30	100.0	23	100.0	45	100.0	133	100.0
	Post-Strike	9	100.0	14	100.0	14	100.0	12	100.0	24	100.0	73	100.0
Chi square[1] (d.f.=4)	Pre-Strike	Numbers too small to compute chi square.											
	Strike	5.45 n.s.s.											
	Post-Strike	5.32 n.s.s.											

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[1] Pertaining to the significance of the relationship between item response and grade level.

TABLE II-37

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES EXCLUDING THOSE STUDYING FULL-TIME BY SEX, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Did you discuss your leaving with anyone at your school? (If yes, with whom?)"

Response	Year of	Male		Female		Total		Chi Square[1]
	Withdrawal	N	%	N	%	N	%	
Yes with no elaboration	Pre-Strike	1	1.7	1	1.9	2	1.8	
	Strike	19	7.5	16	8.6	35	7.9	
	Post-Strike	18	7.4	8	3.9	26	5.8	
Teacher	Pre-Strike	8	13.3	7	13.0	15	13.2	
	Strike	17	6.7	15	8.1	32	7.3	
	Post-Strike	26	10.7	17	8.2	43	9.6	
Guidance Counsellor	Pre-Strike	17	28.4	18	33.2	35	30.7	
	Strike	52	20.4	37	19.9	89	20.2	
	Post-Strike	55	22.8	62	29.8	117	26.0	
Principal/Vice-Principal	Pre-Strike	8	13.3	5	9.3	13	11.4	
	Strike	32	12.5	19	10.2	51	11.6	
	Post-Strike	23	9.5	14	6.7	37	8.2	
Any Combination of above three	Pre-Strike	3	5.0	2	3.7	5	4.4	
	Strike	7	2.7	7	3.8	14	3.2	
	Post-Strike	5	2.1	11	5.3	16	3.6	
Friend	Pre-Strike	2	3.3	-	-	2	1.8	
	STrike	-	-	1	.5	1	.2	
	Post-Strike	2	.8	3	1.4	5	1.1	
Other	Pre-Strike	-	-	-	-	-	-	
	Strike	-	-	1	.5	1	.2	
	Post-Strike	-	-	2	1.0	2	.4	
Sub-total - "Yes"	Pre-strike	39	65.0	33	61.1	72	63.3	
	Strike	127	49.8	96	51.6	223	50.6	
	Post-strike	129	53.3	117	56.3	246	54.7	6.01
Sub-total - "No"	Pre-strike	21	35.0	21	38.9	42	36.7	(d.f.=2)
	Strike	128	50.2	90	48.4	218	49.4	
	Post-strike	113	46.7	91	43.7	204	45.3	p ≤.05
Total Respondents	Pre-strike	60	100.0	54	100.0	114	100.0	
	Strike	255	100.0	186	100.0	441	100.0	
	Post-strike	242	100.0	208	100.0	450	100.0	
Chi square[2] (d.f.=1)	Pre-strike			.19		n.s.s.		
	Strike			.14		n.s.s.		
	Post-strike			.39		n.s.s.		

[1] Pertaining to the significance of the relationship between item response and year of withdrawal.

[2] Pertaining to the significance of the relationship between item response and sex.

TABLE II-38

PERCENTAGE DISTRIBUTION OF INTERVIEWEES EXCLUDING THOSE STUDYING FULL-TIME BY GRADE, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Did you discuss your leaving with anyone at your school? (If yes, with whom?"

Response	Year Of Withdrawal	%	Grade					Total	
			9	10	11	12	13	N	%
Yes with no elaboration	Pre-Strike	%	-	3.7	-	-	11.1	2	1.9
	Strike	%	7.2	7.7	9.6	6.0	8.9	34	8.0
	Post-Strike	%	7.8	2.2	5.7	4.9	8.9	24	5.7
Teacher	Pre-Strike	%	7.1	11.1	17.9	17.6	11.1	15	14.1
	Strike	%	10.1	5.1	6.1	7.1	8.9	31	7.3
	Post-Strike	%	9.8	7.5	11.4	7.4	11.1	40	9.5
Guidance Counsellor	Pre-Strike	%	21.4	44.4	17.9	47.2	11.1	31	29.2
	Strike	%	24.6	15.4	22.6	20.2	20.3	88	20.7
	Post-Strike	%	23.5	28.0	21.0	30.9	32.3	114	27.1
Principal/Vice-Principal	Pre-Strike	%	14.3	14.0	15.5	-	11.1	13	12.3
	Strike	%	14.5	11.5	14.8	9.5	7.6	50	11.8
	Post-Strike	%	7.8	15.1	9.5	8.6	2.2	37	8.8
Any combination of above items	Pre-Strike	%	-	-	2.6	17.6	-	4	3.8
	Strike	%	-	6.4	2.6	3.6	2.5	13	3.1
	Post-Strike	%	2.0	4.3	4.8	1.2	4.4	15	3.6
Friend	Pre-Strike	%	-	-	5.1	-	-	2	1.9
	Strike	%	-	-	-	1.2	-	1	.2
	Post-Strike	%	-	-	3.8	-	1.1	5	1.2
Other	Pre-Strike	%	-	-	-	-	-	-	-
	Strike	%	-	-	-	1.2	-	1	.2
	Post-Strike	%	-	1.1	-	-	1.1	2	.5
Plans not discussed with anyone at school	Pre-Strike	%	57.2	25.9	41.0	17.6	55.6	39	36.8
	Strike	%	43.6	53.0	44.3	51.2	51.8	207	48.7
	Post-Strike	%	49.1	41.8	43.8	47.0	38.9	183	43.6
Total Respondents	Pre-Strike	N	14	27	39	17	9	106	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
	Strike	N	69	78	115	84	79	425	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
	Post-Strike	N	51	93	105	81	90	420	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
Chi square[1] (d.f.=4)	Pre-Strike			8.21		n.s.s.			
	Strike			2.98		n.s.s.			
	Post-Strike			1.89		n.s.s.			

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[1] Pertaining to the significance of the relationship between item response and grade level.

TABLE II-39

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES EXCLUDING THOSE STUDYING FULL-TIME BY REACTION OF SCHOOL PERSONNEL TO PLANS FOR LEAVING SCHOOL, SEX AND YEAR OF WITHDRAWAL

Reaction	Year of Withdrawal	Male		Female		Total		Chi Square[1]
		N	%	N	%	N	%	
"I was encouraged to stay in school"	Pre-Strike	19	57.6	20	76.9	39	66.1	
	Strike	60	49.2	53	60.2	113	53.8	
	Post-Strike	49	42.3	56	54.4	105	47.9	
"I was encouraged to leave school"	Pre-Strike	10	30.3	4	15.4	14	23.7	
	Strike	46	37.7	27	30.7	73	34.8	7.91
	Post-Strike	47	40.5	30	29.1	77	35.2	(d.f.=4)
Other	Pre-Strike	4	12.1	2	7.7	6	10.2	
	Strike	16	13.1	8	9.1	24	11.4	n.s.s.
	Post-Strike	20	17.2	17	16.5	37	16.9	
Total Respondents	Pre-Strike	33	100.0	26	100.0	59	100.0	
	Strike	122	100.0	88	100.0	210	100.0	
	Post-Strike	116	100.0	103	100.0	219	100.0	
Chi square[2] d.f.=2)	Pre-Strike		2.47		n.s.s.			
	Strike		2.61		n.s.s.			
	Post-Strike		3.71		n.s.s.			

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[1] Pertaining to the significance of the relationship between reaction of school personnel and year of withdrawal.

[2] Pertaining to the significance of the relationship between reaction of school personnel and sex.

TABLE II-40

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES EXCLUDING THOSE STUDYING FULL-TIME BY REACTION OF SCHOOL PERSONNEL TO PLANS FOR LEAVING SCHOOL, GRADE AND YEAR OF WITHDRAWAL

Reaction	Year Of Withdrawal	Grade										Total	
		9		10		11		12		13			
		N	%	N	%	N	%	N	%	N	%	N	%
"I was encouraged to stay in school"	Pre-Strike	4	80.0	13	68.4	13	76.5	8	61.5	1	100.0	39	70.9
	Strike	22	57.9	20	58.8	30	50.8	14	36.8	24	64.9	110	53.3
	Post-Strike	12	52.2	22	45.8	23	47.9	20	47.6	21	42.0	98	46.4
"I was encouraged to leave school"	Pre-Strike	1	20.0	5	26.3	3	17.6	3	23.1	-	-	12	21.8
	Strike	15	39.5	12	35.3	20	33.9	15	39.5	10	27.0	72	35.0
	Post-Strike	8	34.8	18	37.5	18	37.5	15	35.7	18	36.0	77	36.5
Other	Pre-Strike	-	-	1	5.3	1	5.9	2	15.4	-	-	4	7.3
	Strike	1	2.6	2	5.9	9	15.3	9	23.7	3	8.1	24	11.7
	Post-Strike	3	13.0	8	16.7	7	14.6	7	16.7	11	22.0	36	17.1
Total Respondents	Pre-Strike	5	100.0	19	100.0	17	100.0	13	100.0	1	100.0	55	100.0
	Strike	38	100.0	34	100.0	59	100.0	38	100.0	37	100.0	206	100.0
	Post-Strike	23	100.0	48	100.0	48	100.0	42	100.0	50	100.0	211	100.0
Chi square[1] (d.f. = 2)	Pre-Strike			.81		(d.f.=4)		n.s.s.					
	Strike			13.80		(d.f.=8)		n.s.s.					
	Post-Strike			1.58		(d.f.=8)		n.s.s.					

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[1] Pertaining to the significance of the relationship between reaction of school personnel and grade level.

TABLE II-41

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES EXCLUDING THOSE STUDYING FULL-TIME BY SEX, YEAR OF WITHDRAWAL AND REASON FOR NOT DISCUSSING PLANS TO LEAVE SCHOOL WITH ANYONE AT SCHOOL

Reason	Year of Withdrawal	Male		Female		Total		Chi Square[1]
		N	%	N	%	N	%	
"School personnel are just not interested in kids"	Pre-Strike	1	5.0	1	3.8	2	4.3	
	Strike	6	4.5	7	7.4	13	5.7	
	Post-Strike	4	3.3	5	5.1	9	4.1	
"Felt it would be waste of time, I'd made up my mind"	Pre-Strike	15	75.0	14	53.8	29	63.1	
	Strike	70	53.0	54	56.8	124	54.6	
	Post-Strike	84	69.4	66	67.3	150	68.5	7.55
"Never got along with teachers and others - that's why I was leaving"	Pre-Strike	1	5.0	1	3.8	2	4.3	(d.f.=6)
	Strike	8	6.1	2	2.1	10	4.4	
	Post-Strike	12	9.9	4	4.1	16	7.3	n.s.s.
Other	Pre-Strike	3	15.0	10	38.6	13	28.3	
	Strike	36	27.3	25	26.3	61	26.9	
	Post-Strike	21	17.4	23	23.5	44	20.1	
"I left during strike there weren't any teachers to consult"	Pre-Strike	-	-	-	-	-	-	
	Strike	12	9.1	7	7.4	19	8.4	
	Post-Strike	-	--	-	--	-	--	
Total Respondents	Pre-Strike	20	100.0	26	100.0	46	100.0	
	Strike	132	100.0	95	100.0	227	100.0	
	Post-Strike	121	100.0	98	100.0	219	100.0	
Chi square[2] (d.f.=4)	Pre-Strike			2.17		n.s.s.		
	Strike			.32		n.s.s.		
	Post-Strike			.32		n.s.s.		

[1] Pertaining to the significance of the relationship between reason for not discussing plans to leave school and year of withdrawal.

[2] Pertaining to the significance of the relationship between reason for not discussing plans to leave school and sex.

TABLE II-42

PERCENTAGE DISTRIBUTION OF INTERVIEWEES EXCLUDING THOSE STUDYING FULL-TIME BY GRADE, YEAR OF WITHDRAWAL AND REASON FOR NOT DISCUSSING PLANS TO LEAVE SCHOOL WITH ANYONE AT SCHOOL

Reason	Year of Withdrawal	%	Grade					Total	
			9	10	11	12	13	N	%
"School personnel are just not interested in kids"	Pre-Strike	%	12.5	-	5.5	-	-	2	4.5
	Strike	%	6.5	-	3.7	8.9	9.5	12	5.6
	Post-Strike	%	7.4	2.2	11.5	-	-	9	4.5
"Felt it would be waste of time, I'd made up my mind"	Pre-Strike	%	50.0	62.5	66.7	25.0	83.3	27	61.5
	Strike	%	54.7	70.4	61.1	44.4	45.2	120	55.5
	Post-Strike	%	55.6	64.5	65.4	86.5	64.9	134	67.7
"Never got along with teachers and others - thats why I was leaving"	Pre-Strike	%	12.5	-	5.6	-	-	2	4.5
	Strike	%	6.5	2.3	7.4	6.7	-	10	4.6
	Post-Strike	%	14.8	8.9	7.7	2.7	2.7	14	7.1
"Other"	Pre-Strike	%	25.0	37.5	22.2	75.0	16.7	13	29.5
	Strike	%	25.8	18.2	24.1	33.3	31.0	57	26.4
	Post-Strike	%	22.2	24.4	15.4	10.8	32.4	41	20.7
"I left during strike there were not any teachers to consult"	Pre-Strike	%	-	-	-	-	-	-	-
	Strike	%	6.5	9.1	3.7	6.7	14.3	17	7.9
	Post-Strike	%	-	-	-	-	-	-	-
Total Respondents	Pre-Strike	N	8	8	18	4	6	44	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
	Strike	N	31	44	54	45	42	216	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
	Post-Strike	N	27	45	52	37	37	198	-
		%	100.0	100.0	100.0	100.0	100.0	-	100.0
Chi square[1] (d.f.=4)	Pre-Strike			4.11		n.s.s.			
	Strike			8.70		n.s.s.			
	Post-Strike			8.27		n.s.s.			

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[1] Pertaining to the significance of the relationship between reason for not discussing plans to leave school with anyone at school and grade level.

TABLE II-43

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES STUDYING FULL-TIME BY SEX, YEAR OF WITHDRAWAL AND FUTURE PLANS

Future Plans	Year of Withdrawal	Male		Female		Total		Chi Square[1]
		N	%	N	%	N	%	
Further education	Pre-Strike	8	61.5	7	53.8	15	57.7	
	Strike	54	77.1	32	57.1	86	68.3	
	Post-Strike	22	60.0	18	50.0	40	55.6	
Plan to get a job right away	Pre-Strike	3	23.1	5	38.5	8	30.8	
	Strike	9	12.9	15	26.8	24	19.0	
	Post-Strike	9	25.7	14	38.9	23	31.9	
Plan to get married	Pre-Strike	-	-	1	7.7	1	3.8	4.49
	Strike	1	1.4	3	5.4	4	3.2	
	Post-Strike	-	-	-	-	-	-	(d.f.=4)
Plan to take time for travel	Pre-Strike	-	-	-	-	-	-	
	Strike	-	-	1	1.8	1	.8	n.s.s.
	Post-Strike	-	-	1	2.8	1	1.4	
Other	Pre-Strike	2	15.4	-	-	2	7.7	
	Strike	6	8.6	5	8.9	11	8.7	
	Post-Strike	5	14.3	3	8.3	8	11.1	
Total Respondents	Pre-Strike	13	100.0	13	100.0	26	100.0	
	Strike	70	100.0	56	100.0	126	100.0	
	Post-Strike	36	100.0	36	100.0	72	100.0	
Chi square[2]	Pre-Strike	.90		d.f.=2		n.s.s.		
	Strike	5.89		d.f.=2		n.s.s.		
	Post-Strike	1.97		d.f.=2		n.s.s.		

[1] Pertaining to the significance of the relationship between future plans and year of withdrawal.

[2] Pertaining to the significance of the relationship between future plans and sex.

TABLE II-44

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES STUDYING FULL-TIME BY GRADE, YEAR OF WITHDRAWAL AND FUTURE PLANS

Future Plans	Year of Withdrawal	Grade										TOTAL	
		9		10		11		12		13			
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Further education	Pre-Strike	-	-	5	100.0	4	66.7	1	25.0	3	37.5	13	54.2
	Strike	10	71.4	15	71.4	16	57.1	17	73.9	27	69.2	85	68.0
	Post-Strike	5	45.5	9	56.3	6	42.9	8	72.7	14	53.9	42	53.8
Plan to get a job right away	Pre-Strike	1	100.0	-	-	2	33.3	3	75.0	2	25.0	8	33.3
	Strike	3	21.4	2	9.5	7	25.0	5	21.7	7	17.9	24	19.2
	Post-Strike	5	45.5	5	31.2	5	35.7	2	18.2	10	38.5	27	34.6
Plan to get married	Pre-Strike	-	-	-	-	-	-	-	-	1	12.5	1	4.2
	Strike	1	7.1	-	-	2	7.1	-	-	1	2.6	4	3.2
	Post-Strike	-	-	-	-	-	-	-	-	-	-	-	-
Plan to take time off for travel	Pre-Strike	-	-	-	-	-	-	-	-	-	-	-	-
	Strike	-	-	-	-	-	-	1	4.3	-	-	1	.8
	Post-Strike	-	-	-	-	-	-	-	-	1	3.8	1	1.3
Other	Pre-Strike	-	-	-	-	-	-	-	-	2	25.0	2	8.3
	Strike	-	-	4	19.0	3	10.7	-	-	4	10.3	11	8.8
	Post-Strike	1	9.0	2	12.5	3	21.4	1	9.1	1	3.8	8	10.3
Total Respondents[1]	Pre-Strike	1	100.0	5	100.0	6	100.0	4	100.0	8	100.0	24	100.0
	Strike	14	100.0	21	100.0	28	100.0	23	100.0	39	100.0	125	100.0
	Post-Strike	11	100.0	16	100.0	14	100.0	11	100.0	26	100.0	78	100.0
Chi square d.f.=4	Pre-Strike	Numbers too small for computing Chi square											
	Strike	2.10						n.s.s.					
	Post-Strike	2.61						n.s.s.					

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[1] Excluding those for whom information was missing.

TABLE II-45

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWS EXCLUDING THOSE STUDYING FULL TIME BY SEX, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Have you made any other plans beyond what you are presently doing?"

Item Response	Year of Withdrawal	Male		Female		TOTAL		Chi square[1]
		No.	%	No.	%	No.	%	
Stay at present job	Pre-Strike	24	42.8	20	40.0	44	41.6	
	Strike	69	29.0	37	22.2	106	26.3	
	Post-Strike	3	4.3	1	1.7	4	3.1	
Find better job	Pre-Strike	16	28.6	12	24.0	28	26.4	
	Strike	50	21.0	38	22.6	88	21.7	
	Post-Strike	17	24.7	14	23.8	31	24.2	
Plan to get married	Pre-Strike	1	1.8	2	4.0	3	2.8	71.09
	Strike	2	0.8	9	5.4	11	2.7	
	Post-Strike	0	0	5	8.5	5	3.9	
Plan to return to high school full-time to complete program	Pre-Strike	8	14.3	4	8.0	12	11.3	d.f. = 8
	Strike	20	8.4	17	10.2	37	9.1	
	Post-Strike	16	23.2	15	25.4	31	24.2	
Other education plans	Pre-Strike	5	8.9	9	18.0	14	13.2	$p \leq .001$
	Strike	54	22.7	34	20.4	88	21.7	
	Post-Strike	15	21.7	12	20.3	27	21.2	
Travel	Pre-Strike	0	0	2	4.0	2	1.9	
	Strike	18	7.6	8	4.8	26	6.4	
	Post-Strike	1	1.4	2	3.4	3	2.3	
Other	Pre-Strike	2	3.6	1	2.0	3	2.8	
	Strike	25	10.5	24	14.4	49	12.1	
	Post-Strike	17	24.7	10	16.9	27	21.1	
Total Respondents[2]	Pre-Strike	56	100.0	50	100.0	106	100.0	
	Strike	238	100.0	167	100.0	405	100.0	
	Post-Strike	69	100.0	59	100.0	128	100.0	
Chi square[3] (d.f.=4)	Pre-Strike		3.58		d.f. = 4		n.s.s.	
	Strike		3.95		d.f. = 4		n.s.s.	
	Post-Strike		.91		d.f. = 4		n.s.s.	

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[1] Pertaining to the significance of the relationship between item response and year of withdrawal.

[2] Excluding those for whom information was missing for either of the two modes of classification.

[3] Pertaining to the significance of the relationship between item response and sex

TABLE II-46

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWS EXCLUDING THOSE STUDYING BY GRADE, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Have you made any other plans beyond what you are presently doing?"

Item Response	Year of Withdrawal	Grade										TOTAL	
		9		10		11		12		13			
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Stay at present job	Pre-Strike	5	45.4	12	44.4	15	42.9	6	35.3	3	33.3	41	44.4
	Strike	11	20	26	34.6	26	24.2	21	26.6	12	16.7	96	24.7
	Post-Strike	2	10.0	1	2.4	0	0	0	0	1	10.0	4	3.5
Find better job	Pre-Strike	2	18.2	11	40.8	9	25.6	4	23.6	2	22.3	28	28.4
	Strike	16	29.1	18	24.0	23	21.5	16	20.3	15	20.8	88	22.8
	Post-Strike	3	40.0	7	17.2	8	26.7	3	21.4	1	10.0	27	23.5
Plan to get married	Pre-Strike	1	9.1	0	0	1	2.9	0	0	1	11.1	3	3.0
	Strike	6	10.9	2	2.7	1	0.9	0	0	2	2.8	11	2.8
	Post-Strike	1	5.0	3	7.3	1	3.3	0	0	0	0	5	4.3
Plan to return to night school full-time to complete program	Pre-Strike	1	9.1	2	7.4	5	14.3	3	17.6	0	0	11	11.1
	Strike	3	5.5	3	4.0	15	14.0	8	10.1	7	9.6	36	9.3
	Post-Strike	2	10.0	15	36.6	8	26.7	2	14.3	1	10.0	28	24.3
Other education plans	Pre-Strike	1	9.1	2	7.4	4	11.4	3	17.6	2	22.2	12	12.1
	Strike	8	14.5	12	16.0	20	18.7	17	21.5	28	38.9	85	21.9
	Post-Strike	2	10.0	8	19.5	5	16.7	4	28.6	5	50.0	24	20.9
Travel	Pre-Strike	0	0	0	0	0	0	1	5.9	1	11.1	2	2.0
	Strike	5	9.1	5	6.7	5	4.7	6	7.6	4	5.6	25	6.4
	Post-Strike	0	0	1	2.4	0	0	1	7.1	0	0	2	1.7
Other	Pre-Strike	1	9.1	0	0	1	2.9	0	0	0	0	2	2.0
	Strike	6	10.9	9	12.0	17	15.9	11	13.9	4	5.6	47	12.1
	Post-Strike	5	25.0	6	14.6	8	26.7	4	28.6	2	20.0	25	21.8
Total Respondents[1]	Pre-Strike	11	100.0	27	100.0	35	100.0	17	100.0	9	100.0	99	100.0
	Strike	55	100.0	75	100.0	107	100.0	79	100.0	72	100.0	388	100.0
	Post-Strike	20	100.0	41	100.0	30	100.0	14	100.0	10	100.0	115	100.0
Chi square[2] (d.f. = 12)	Pre-Strike				11.61			n.s.s.					
	Strike				42.35			$p \leq .001$					
	Post-Strike				14.50			n.s.s.					

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[1] Excluding those for whom information was missing for either of the two modes of classification.

[2] Pertaining to the significance of the relationship between item response and grade.

TABLE II-47

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY SEX, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Do you think the Metro teachers were justified in going on strike?"

Item Response	Year of Withdrawal	Male		Female		Total		Chi Square[1]
		N	%	N	%	N	%	
YES	Strike	132	56.7	70	42.7	202	50.9	.16 d.f.= 1 n.s.s.
	Post-Strike	30	58.8	21	46.7	51	53.1	
NO	Strike	101	43.3	94	57.3	195	49.1	
	Post-Strike	21	41.2	24	53.3	45	46.9	
Total Respondents[2]	Strike	233	100.0	164	100.0	397	100.0	
	Post-Strike	51	100.0	45	100.0	96	100.0	
Chi Square[3] (d.f.=1)	Strike			7.52	$p \leq .01$			
	Post-Strike			1.42	n.s.s.			

[1] Pertaining to the significance of the relationship between item response and year of withdrawal.

[2] Pertaining to the significance of the relationship between item response and sex.

[3] Excluding missing information.

TABLE II-48

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY GRADE, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Do you think Metro teachers were justified in going on strike?"

Grade Level	Year of Withdrawal	Item Response				TOTAL	
		YES		NO			
		#	%	#	%	#	%
9	Strike	27	54.0	23	46.0	50	100.0
	Post-Strike	6	54.5	5	45.5	11	100.0
10	Strike	32	51.6	30	48.4	62	
	Post-Strike	18	52.9	16	47.1	34	100.0
11	Strike	54	51.4	51	48.6	105	
	Post-Strike	13	65.0	7	35.0	20	100.0
12	Strike	36	45.6	43	54.4	79	
	Post-Strike	6	54.5	5	45.5	11	100.0
13	Strike	50	54.3	42	45.7	92	
	Post-Strike	2	28.6	5	71.4	7	100.0
Total Respondents[1]	Strike	199	51.3	189	48.7	388	
	Post-Strike	45	54.2	38	45.8	83	100.0
Chi/square[2] (d.f.=4)	Strike	1.53		n.s.s.			
	Post-Strike	2.82		n.s.s.			

[1] Includes only those for whom complete information was available.

[2] Pertaining to the significance of the relationship between item response and grade level.

TABLE II-49

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY SEX, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Do you think the teachers should have gone back sooner?"

Item Response	Year of Withdrawal	Male		Female		TOTAL		Chi Square[1]
		#	%	#	%	#	%	
YES	Strike	188	75.5	155	82.9	343	78.7	2.38 d.f.=1 n.s.s.
	Post-Strike	36	63.2	37	82.2	73	71.6	
NO	Strike	61	24.5	32	17.1	93	21.3	
	Post-Strike	21	36.8	8	17.8	29	28.4	
Total Respondents[2]	Strike	249	100.0	187	100.0	436	100.0	
	Post-Strike	57	100.0	45	100.0	102	100.0	
Chi square[3] (d.f.=1)	Strike		3.47			n.s.s.		
	Post-Strike		4.49			$p \leq .05$		

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[1] Pertaining to the significance of the relationship between item response and year of withdrawal.

[2] Excluding those for whom information was missing for either of the two modes of classification.

[3] Pertaining to the significance of the relationship between item reponse and sex.

TABLE II-50

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY GRADE, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Do you think Metro teachers should have gone back sooner?"

Grade Level	Year of Withdrawal	Item Response				TOTAL	
		YES		NO			
		#	%	#	%	#	%
9	Strike	40	71.4	16	28.6	56	100.0
	Post-Strike	9	64.3	5	35.7	14	100.0
10	Strike	59	81.9	13	18.1	72	100.0
	Post-Strike	27	75.0	9	25.0	36	100.0
11	Strike	89	78.8	24	21.2	113	100.0
	Post-Strike	14	63.6	8	36.4	22	100.0
12	Strike	66	78.6	18	21.4	84	100.0
	Post-Strike	9	90.0	1	10.0	10	100.0
13	Strike	80	78.4	22	21.6	102	100.0
	Post-Strike	7	100.0	0	0.0	7	100.0
Total Respondents[1]	Strike	334	78.2	93	21.8	427	100.0
	Post-Strike	66	74.2	23	25.8	89	100.0
Chi square[2]	Strike	2.13		d.f.=4	n.s.s.		
	Post-Strike	5.53		d.f.=3	n.s.s.		

[1] Includes only those for whom complete information was available.

[2] Pertaining to the significance of the relationship between item response and grade level.

TABLE II-51

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY SEX, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Should the government have intervened sooner?"

Item Response	Year of Withdrawal	Male		Female		TOTAL		Chi square[1]
		No.	%	No.	%	No.	%	
Yes	Strike	181	75.1	146	83.0	327	78.4	.07
	Post Strike	40	71.4	38	90.5	78	79.6	d.f.=1
No	Strike	60	24.9	30	17.0	90	21.6	
	Post Strike	16	28.6	4	9.5	20	20.4	n.s.s.
Total Respondents[2]	Strike	241	100.0	176	100.0	417	100.0	
	Post Strike	56	100.0	42	100.0	98	100.0	
Chi square[3] (d.f. = 1)	Strike		3.70				n.s.s.	
	Post Strike		5.36				$p \leq .05$	

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[1] Pertaining to the significance of the relationship between item response and year of withdrawal.

[2] Excluding those for whom information was missing for either of the two modes of classification.

Pertaining to the significance of the relationship between item response and sex.

TABLE II-52

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY GRADE, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"Should the government have intervened sooner?"

Grade Level	Year of Withdrawal	Item Response				TOTAL	
		YES		NO			
		#	%	#	%	#	%
9	Strike	44	81.5	10	18.5	54	100.0
	Post-Strike	9	64.3	5	35.7	14	100.0
10	Strike	57	80.3	14	19.7	71	100.0
	Post-Strike	29	85.3	5	14.7	34	100.0
11	Strike	79	73.8	28	26.2	107	100.0
	Post-Strike	16	76.2	5	23.8	21	100.0
12	Strike	65	85.5	11	14.5	76	100.0
	Post-Strike	9	90.0	1	10.0	10	100.0
13	Strike	72	72.7	27	27.3	99	100.0
	Post-Strike	7	100.0	0	0.0	7	100.0
Total Respondents[1]	Strike	317	77.9	90	22.1	407	100.0
	Post-Strike	70	81.4	16	18.6	86	100.0
Chi Square[2] (d.f.=3)	Strike	1.68		n.s.s.			
	Post-Strike	5.24		n.s.s.			

[1] Includes only those for whom complete information was available.

[2] Pertaining to the significance of the relationship between item response and grade level.

TABLE II-53

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY SEX, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"By and large would you say you were on their (teachers') side?"

Item Response	Year of	Male		Female		Total		Chi Square[1]
		#	%	#	%	#	%	
YES	Strike	112	51.4	56	35.9	168	44.9	
	Post-Strike	29	58.0	25	58.1	54	58.1	5.16
NO	Strike	106	48.6	100	64.1	206	55.1	d.f.=1
	Post-Strike	21	42.0	18	41.9	39	41.9	
Total Respondents[2]	Strike	218	100.0	156	100.0	374	100.0	$p \leq .01$
	Post-Strike	50	100.0	43	100.0	93	100.0	
Chi Square[3]	Strike		8.81		$\leq .01$			
	Post-Strike		.00		n.s.s.			

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[1] Pertaining to the significance of the relationship between item response and grade level.

[2] Includes only those for whom complete information was available

[3] Pertaining to the significance of the relationship between item response and sex.

TABLE II-54

NUMERICAL AND PERCENTAGE DISTRIBUTION OF INTERVIEWEES BY SEX, YEAR OF WITHDRAWAL AND RESPONSE TO ITEM:

"By and large would you say you were on their (teachers') side?"

Grade Level	Year of Withdrawal	Item Response				TOTAL	
		Yes		No.			
		No.	%	No.	%	No.	%
9	Strike	23	46	27	54	50	100.0
	Post Strike	8	61.5	5	38.5	13	100.0
10	Strike	25	41	36	59	61	100.0
	Post Strike	20	69.0	9	31.0	29	100.0
11	Strike	45	47.9	49	52.1	94	100.0
	Post Strike	10	47.6	11	52.4	21	100.0
12	Strike	27	38.6	43	61.4	70	100.0
	Post Strike	7	70.0	3	30.0	10	100.0
13	Strike	48	52.2	44	47.8	92	100.0
	Post Strike	1	14.3	6	85.7	7	100.0
	Strike	168	45.8	199	54.2	367	100.0
	Post Strike	46	57.5	34	42.5	80	100.0
Chi square[2]	Strike	3.71		d.f. = 4		n.s.s.	
	Post Strike	3.24		d.f. = 3		n.s.s.	

[1] Includes only those for whom complete information was available.

[2] Pertaining to the significance of the relationship between item response and sex.

CHAPTER 3

EFFECTS ON GRADE 12 AND GRADE 13 TRANSITION CONDITIONS

In this chapter we shall look at two important transition points from the school system to further educational programs. From Grades 12 and 13 students apply for, are offered admission to, and are eventually registered in, a wide variety of vocationally oriented programs of the Colleges of Applied Arts and Technology. In this selection process in Spring, 1976 some Ontario students found themselves in competition with others whose school year had not been disrupted by strike. How did they fare? Do the statistics show that the normal flow of students continued unaffected?

From Grade 13 students apply for, are offered admission to, and are eventually registered in, the 16 universities of the province. They, too, enter a wide variety of study programs, some of them leading ultimately to professional occupations. In this selection process in Spring, 1976 some Ontario students found themselves in competition with others whose school year had not been disrupted by strike. How did they fare?

What statistical evidence is there of a short term, immediate impact on these transition points? Did changes occur in the year of the strike? If so, they would manifest themselves between February and October, the period when the transition is first sought and finally achieved.

In concentrating on the short term effect we do not thereby imply that it is more important than the long term--merely that it is easier to assess statistically. This study covers only three years 1974/75-1976/77. One difficulty with measuring long term effects is deciding when to measure; a second is finding the subjects after a lapse of time; and a third is the contaminating effect of intervening influences and post hoc justification.[8]

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[8] Favourable assessment of those who "succeed" in spite of all difficulties and unfavourable assessment of those who do not succeed and need a convenient scapegoat.

Before we begin there is one other *caveat* to mention. No one believes that the normal condition of competition at these transition points is "pure". In fact, we would be hard put to define "pure". The teachers of one school are not all as good as one another in preparing students for the competition. Nor are the teachers of all subjects equally capable. Nor are the students of all schools; nor the students in all subjects. It has been well documented that the student's family and community have a determining influence upon his/her achievements, expectations and choices of study. All these relationships influence the competition and presumably they did so in Spring, 1976 in much the same way as they had in Spring, 1975 and Spring, 1977. If we find that statistically a considerable change was registered in the records of the transition, we do not thereby imply that it was a "fairer" or "less fair" competition, merely that it was different, it changed the set of advantages and disadvantages enjoyed by the members of the competition.

First we shall look at the ratios of Grade 13 graduates and Ontario scholars to Grade 13 enrollment, then at the school/CAAT transition, the school/university transition and the Grade 13 marks of those in the latter competition.

Comparisons between Pre-Strike and Strike Years with Respect to the Ratios of Graduates Reported to Grade 13 Enrollment (R_1) and Scholars to Graduates Reported (R_2)--Table III-1[9]

> Is there a significant difference between these years with regard to the following two ratios?
>
> (1) Graduates reported to Grade 13 enrollment = R_1
> (2) Scholars to graduates reported = R_2.

These ratios were computed for each of the strike boards, for the total strike sample, for Ontario as a whole, and for Ontario apart from the strike boards. The differences between the ratios of pre-strike and strike years were tested for their significance by obtaining "Z" values. As can be seen from Table III-1, the ratio of the number of graduates (reported) to Grade 13 enrollment (R_1) significantly *decreased* in the strike year for the sample as a whole (referred to as sub-total 1 in the table) but it also reduced for the total of the non-striking boards in the province (referred to as sub-total 2) and for Ontario as a whole. This was also true for six of the strike boards: #02, #03, #04, #05, #08 and #10. The change was more marked for the sample of strike boards (sub-total 1) than non-strike boards (sub-total 2) as indicated by higher values of X^2 for sub-total 1. Some increase in the values of R_1 were noticed for particular strike boards--e.g., #01 (from .74 to .77) and #06 (from .69 to .70).

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[9] Comparable data for the post-strike year were not available sufficiently early to be incorporated in this report.

The ratio of scholars to graduates reported (R_2) significantly *increased* from the pre-strike (.23) to the strike (.24) year for the strike sample as a whole. It also increased significantly for the non-strike boards (sub-total 2). R_2 values decreased from the pre-strike to the strike year in three of the affected boards (#01, #02 and #06). However, the difference in the ratios was statistically significant in only one case (#01). The ratio of Ontario scholars to Grade 13 enrollment (R_3) remained unchanged for the sample of strike boards (.17) as well as for the total province (.18), although it showed a slight decrease from .19 to .18 for the non-strike boards. R_3 values decreased from the pre-strike to the strike year in four of the affected boards (#01, #02, #05 and #06). The difference in the ratios, however, was statistically significant for only one board (#01).

From the evidence provided by the data for the strike and pre-strike years, it seems that there was a provincial trend to a lower ratio of graduates to Grade 13 enrollment which manifested itself both generally and in the strike sample between 1974/75 and 1975/76. However, the decrease was somewhat *sharper* in the strike sample than among the non-strike boards. All but two of the strike boards were in line with the trend. Over these two years the ratio of Ontario scholars to Honour Graduates did not change for the non-strike boards but it *increased* significantly for the total sample of those on strike. Whether this improved achievement of the graduating cohort was due to increased effort on the part of the teachers and students or greater leniency in marking cannot be determined because the marks are not standardized. But the data of the next section suggest that the latter is the more likely explanation.

Pre-Strike (1974/75), Strike (1975/76) and Post-Strike (1976/77) Years Compared with Respect to the Ratios of University Applicants to Grade 13 Enrollment (R_1), University Registrants to Applicants (R_2) and University Registrants to Grade 13 Enrollment (R_3)--Table III-2

> Is there a significant difference among the pre-strike, strike and post-strike years with regard to the following three ratios?
>
> 1) University applicants to Grade 13 enrollment = R_1
> 2) University registrants to applicants = R_2
> 3) University registrants to Grade 13 enrollment = R_3

These ratios were computed for each of the strike boards, for the total strike sample, for Ontario as a whole, and for the sample of non-striking boards (i.e., for Ontario excluding the strike boards). The differences between the ratios were tested for significance by obtaining "Z" values. As can be seen from Table III-2, in the strike sample (sub-total 1) the ratio of the number of applicants to the Grade 13 enrollment significantly decreased from the pre-strike (.76) to the strike year (.72) and again from the strike to the post-strike year (.63). The corresponding ratios for the non-strike boards combined (i.e., sub-total 2) were identical for the first two years (.73), i.e., no change occurred in the strike year. And the non-strike boards' 1976/77 reduction was lower than that of the strike sample (strike ratios, .76, .72, .68 *vs.* non-strike, .73, .73, .71).

The difference in the ratios for the strike and pre-strike years was significant for four of the strike boards, #02, #04, #05 and #10. Some increase in the values of R_1 was noticed for systems #01 (from .47 to .54) and #09 (from .76 to .77). In #03 and #06 there was no change and for #01 and #08 the decrease was nominal. However, in system #02 the proportion of applicants to the enrollment pool from which they are drawn dropped over the three years significantly from .72 to .62; in system #04 from .55 to .40; in system #05 from .94 to .87; and in system #10 from .72 to .63. For six of these boards (#01, 02, 03, 06, 07 and 08) the values of R_1 dropped from the strike to the post-strike year. However, the difference in the R_1 values of 1975 and 1976 were significant only for three of these boards (#03, #07 and #08). R_1 for sub-total 2 showed significant decline from the strike to the post-strike year.

The ratios of university registrants to applicants (R_2) for the combined strike sample (sub-total 1) also showed a significant *decrease* (from .72 to .69) in the strike year and then remained unchanged in the post-strike year. The corresponding ratios for sub-total 2 (i.e., the non-strike boards combined) showed a significant *increase* from the pre-strike (.73) to the strike year (.74) followed by a significant *decrease* in the post-strike year (.72). A decline in the value of R_2 for the strike year was noticed for all the strike boards except three (#01, #02, #04). The differences in the values of R_2 for the strike and pre-strike years were found to be significant for systems #04, #05 and #08. For the former which is a small board it was a significant improvement, for the other two which are very large boards it was a marked deterioration. Individually most of the strike boards registered a drop in the values of R_2 over the three years from pre-strike to post-strike. But that portion of the change which was registered from the strike to the post-strike year (the difference in their R_2 values) was not significant for any of these boards except #07.

For sub-total 1 (the strike sample) the ratio of university registrants to Grade 13 enrollment (R_3) significantly *decreased* from the pre-strike (.54) to the strike year (.50) and continued decreasing in the post-strike year (.47). The corresponding ratios for sub-total 2 slightly *increased* from the pre strike (.53) to the strike year (.54) and then decreased significantly in the post-strike year (.52). Boards #01 and #07 were the only school boards that deviated from the strike sample "norm" (by showing no change or a positive change in their values of R_3 for the strike year). However, the differences between the values of R_3 in the pre-strike and strike years were significant for only four of the ten boards (#02, #05, #08, #10). For seven (#01, #02, #03, #07, #08, #09 and #10) the value of R_3 dropped from the strike to the post-strike year. However, the difference in the strike and post-strike values of R_3 was significant only for five of them (#02, #03, #07, #08 and #09).

From this evidence we can say that in 1975/76 there was, for the strike sample, a significant decrease in the proportion of their Grade 13 students who applied for university places, the proportion of registrants in universities to their applicants for places, and the ratio of registrants to the enrollment pool of Grade 13 in their schools. In that year in the rest of the province there was no change in the ratio of applicants to Grade 13 enrollment, there was a significant increase in the ratio of registrants to applicants and a modest (non-significant) increase in registrants to Grade 13 pool. Whether the decrease in the strike boards was caused by the strike cannot be determined by data such as these. All that has been shown is that a change did take place in this sample as a whole and it was atypical. It was not a change being generally experienced in the province that year. Not all boards of the sample were affected. The detailed differences are shown in Table III-2.

Comparisons of the values of R_1, R_2 and R_3 over these years were also made by the type of school. These data are shown in Table III-3. The values of R_1 decreased from the pre-strike to the strike year for all types of school and the other "alternatives" identified in Table III-3, except for the category designated as "high school" and one alternative school of one of the Metro Boards (designated here as Code #10). The difference in values of R_1 were statistically significant for schools grouped under the categories "collegiate institute" and "secondary school". Three of the schools offering "alternative" programs of study (#09, #10, #13) also showed a significant difference in their

R_1 values for the pre-strike and strike years. The value of R_1 changed significantly from the strike to the post-strike years only for the "collegiate institutes" and the schools of Code #09. However, the reversal in direction of change (pre-strike to strike *vs.* strike to post-strike) from negative to positive (implying a recovery from the effect of the strike on the ratio of university applicants to the Grade 13 enrollment pool) was noticed only for the latter.

From 1974 to 1975 the comparison of R_2 values by school type showed some decrease for schools designated as collegiate institutes, secondary schools, technical and commercial schools and for three of the schools offering alternative programs. However, the differences in the values of R_2 were significant only for the first two categories. From the strike to the post-strike year, R_2 value changed significantly only for "high schools" and sub-total_2 (i.e., the non-strike Ontario total). In both cases the direction of change was negative.

The pattern of change in the values of R_3 was similar to that observed for R_2 except that a significant decrease in the value of R_3 was also shown for one of the alternative special schools, Code #12. From this evidence the conclusion may be drawn that between 1974/75 and 1975/76 in the strike boards there occurred a significant *decrease* in the ratio of university application to Grade 13 enrollment in schools which are primarily academic--i.e., those designated as collegiate institutes and secondary schools. The ratios of some of the alternative schools show a similar change. Much the same picture is revealed by the ratios of university registrants to applicants and registrants to Grade 13 enrollment. This suggests that the transition from academic programs to university was adversely affected in the strike year and it had not entirely recovered by the end of the post-strike year.

Patterns of Change in Transition Ratios (R_1, R_2 and R_3), Combining School Board and School Type Patterns Together

Patterns of change in the transition ratios (R_1, R_2 and R_3) by school board and by type of school are shown in Tables III-4 and III-5 respectively. These data were pooled together to prepare expectancy table III-6 producing four main patterns. As can be seen from this table, *Patterns A/A_1*(∨ / ⟍⎯) were most commonly found for R_1 (the ratio of university applicants to Grade 13 enrollment) and R_2 (the ratio of university registrants to applicants). Classification of patterns by type of school (Table III-5) contributed more to Pattern A than the classification by type of school board. Seven of the 13 school types and two school boards (#04 and #05) fitted into this pattern for changes in R_1 values. Classifications by school board (four out of ten) and school type (five out of 13) contributed almost equally to the predominant pattern of change in R_2 values. This pattern was found to occur in seven out of 23 times for R_3 (ratio of university registrants to Grade 13 enrollment) values. Only two school boards (#05 and #06, see Table III-4) and one category (T&CS) of traditional type of schools and four other alternative categories (coded #08, #09, #13 and #14) were represented in this pattern.

Only two school boards (#05 and #06, see Table III-4) and one category of traditional type school (T&CS) were represented in *Pattern A_1*. The remaining four were other school types coded as #08, #09, #12 and #13 (see Table III-5). The sample of strike boards (combined) also fitted into Pattern A_1 (⟍⎯).

Pattern B, depicting a continual drop in transition ratios from the pre-strike to the strike year (⟍) was most commonly observed for R_3 values. It occurred in ten out of the maximum total of 23 cases. Five of the ten school boards (#02, #03, #08, #09 and #10, see Table III-4) and all traditional school types except C&VS and T&CS fitted into this pattern. It may be pointed out here that none of the non-traditional schools were represented in this pattern. The sample of strike boards (combined) and the Ontario total also fitted into this pattern for values of R_1 and R_3. This pattern ranked second and fourth for values of R_1 and R_2 respectively.

Pattern C ranked second in order of frequency for R_2. Three school boards (#01, #02 and #04) and four school types (C&VS, HS, H/SS of C, and the other alternative coded #09) fitted into this pattern (⋀), as well as the sample of strike boards combined and the provincial total.

Pattern D is the residual "other". It has three (‾\ / ~) sub-patterns. It was observed in four or fewer number of cases for all three transition ratios.

Chi square technique was applied to determine if the distribution of observed patterns was significantly different from what would be expected on the basis of random chance. This was done separately for each of the three ratios. As can be seen from Table III-6, chi square value was statistically significant ($p \leq .05$) only for R_3 i.e., the ratio of university registrants to Grade 13 enrollment.

The difference in the observed (ten) and expected (5.75) frequencies of Pattern B contributed most to the chi square value. The differences between the observed and expected frequencies of pattern for R_1 and R_2 values were not statistically significant.

Our interpretation of *Pattern A* (∨) is that the strike had an adverse effect on transition ratios as indicated by the lower proportion of students applying for admission into universities in the strike year. This might be partly explained by the disproportionately higher rate of Grade 13 dropouts in the year of strike. In the year following the strike, as the conditions more or less returned to normal, values of R_1 rose. *Pattern A_1* (_) also suggests that the strike had a negative effect on transition ratios--they decreased. And, moreover, although the strike was over its effects were slow to dissipate and the lower rate had more or less levelled off. *Pattern B* we interpret as probably not showing any impact from the strike--there is a general downward trend in transition ratios R_1 and R_3 for the provincial total anyway.

Pre-Strike and Strike Years Compared with Respect to the Ratios of CAAT Entrants to the Combined Enrollment of Grades 12 and 13--Table III-7

> Is there a significant difference between the pre-strike and strike years with respect to the ratio of CAAT entrants to the combined enrollment of Grades 12 and 13?

From the pre-strike to the strike year there appears to have been a significant *decrease* in the ratios of CAAT entrants to the combined enrollment of Grades 12 and 13, for each of the strike boards. A similar reduction was also observed for sub-totals 1 and 2. However, we cannot determine whether this decrease was associated with the strike without comparable data for the post-strike year (1976/77).[10]

Separate analysis by sex shows no variation in the direction of change for the two sexes although the absolute difference in the ratios for the pre-strike and strike years show considerable variation. For example, in Board #04 the ratio of CAAT entrants to enrollment dropped from .49 to .18 but the decline was much more serious for males than females (the males reduced from .48 to .13, the females .50 to .23). We think the increased transition of the females may have been due to incorporation of the hospital nursing programs with the CAATs.

The data were also analyzed by type of school. As can be seen from Table III-8, from the pre-strike to the strike year the ratio of CAAT entrants to (combined) enrollment reduced in every type of school. It looks, at present, as if the difference in the ratios was part of a general trend. How much the trend might have been exacerbated by the strike could not be determined without complete data on 1976/77 enrollment figures.

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[10] The post-strike year data that we received from the Ministry of Colleges and Universities does not include registrants for the winter term whereas the data for the two pre-strike and strike years included registrants for both the fall and winter terms.

Comparison of University Applicants in the Three Years on Final Weighted Average Grade 13 Marks by School Board, Sex and Year of Application

Applicants to Ontario universities of Spring 1975, '76 and '77 from the ten school boards of our sample were compared on their final weighted average Grade 13 marks. Comparisons were also made by sex, school board and program desired to ascertain the variation introduced by these variables and the interaction(s) between (among) them.

The comparisons were based upon the following two measures:

1) Percentage distribution of applicants in various ranges of the final weighted average marks (50%, 50% to 59% . . . 80% to 89%, 90% to 100%).

2) Means and standard deviations of weighted average final marks.

The percentage distribution of applicants by board, sex and final weighted average marks is shown in Table III-9. The pattern of marks distribution of the students of these boards varies considerably over the three years. For example, the percentage of students falling in the range above 79% dropped from the pre-strike to the strike year, in the boards (#01, #02, #03, #06 and #08) and in four of them (all but #02) the direction of change reversed in the year after the strike. The percentage of female applicants falling in the higher mark ranges (70% and above) was invariably higher than that of the males. This was true of all these boards for each of the three years under study.

The means and standard deviations of the final weighted average marks of the applicants, by school board and sex, are given in Table III-10. There is considerable variation from board to board. The range of mean scores of the boards was as follows:

Year of Application	Males' Marks	Females' Marks	Total Group's Marks
Pre-Strike (1975)	65.48 to 69.68% (syst.#04) (syst.#07)	70.31 to 76.22% (syst.#02) (syst.#01)	67.51 to 72.56% (syst.#04) (syst.#01)
Strike (1976)	66.74 to 73.59% (syst.#02) (syst.#04)	69.14 to 74.46% (syst.#10) (syst.#04)	68.31 to 74.06% (syst.#08) (syst.#04)
Post-Strike (1977)	66.70 to 76.00% (syst.#10) (syst.#01)	69.06 to 73.64% (syst.#10) (syst.#06)	68.99 to 72.1[illegible] (syst.#02) (syst.#01)

As can be seen from Table III-10, the mean of the females' average marks was invariably higher than the mean of the average marks of male applicants. This was true of each strike board for each year under study. Two-way ANOVA was carried out to determine the significance of the mean differences among school boards and between sexes. As can be seen from Table III-11, the mean differences among school boards were highly significant (F = 9.27, d.f. = 9/31,672, $p < .000$), as were the mean differences between the sexes (F = 67.74, d.f. = 1/31,627, $p < .000$). There was no interaction between board and sex (i.e., the direction of the mean difference between the two sexes remained consistently in favour of female applicants, over all the school boards). However, separate analysis of each board showed that the mean difference between the final weighted average marks of its male and female student applicants was not significant for Board #01 or for Board #04 (see Table III-10). For all other boards it was highly significant.

Variance Introduced by Year of Application (pre-strike vs. strike vs. post-strike) in Relation to School Board and Sex

Or to express this differently, the comparison of mean scores by year of application in relation to school board and sex.

For five boards (#01, #05, #08, #09 and #10) the mean scores for 1975/76 (the strike year) were somewhat lower than those of the year before. For three of them (#01, 05 and 08) the mean scores rose again from the strike year to the next one (1976/77) but for the other two (#09 and #10) the downward trend continued.

The pattern of change varied by board and sex. The mean scores of male applicants decreased from 1975 (pre-strike) to 1976 for five school boards (#02, #03, #05, #08 and #09) and then rose once more in the post-strike year for all but one of them (#09). The female applicants' mean scores also decreased from 1975 to 1976 for five boards (#01, 06, 08, 09 and 10) and their downward trend continued into the post-strike year in boards

#01, #09 and #10, but in the other two (#06 and #08) they rose in the post-strike year to be closer to the mean score for the pre-strike year.

Two-way ANOVA was carried out to determine the significance of the differences in the mean scores of applicants from the ten boards for these three years, and the interaction, if any, between school board and year of application. As can be seen from Table III-12, the variance introduced by year of application was not significant. However, the variance introduced by school board was highly significant ($p < .001$) and so was the interaction between school board and year of application ($F = 2.3$, d.f. = 18/3,617, $p \leq .001$). The patterns of change from the pre-strike to the post-strike year varied from one board to another.

Strike Boards vs. Non-Strike Boards. A Comparison of the Percentage Distribution of University Applicants by Weighted Average Final Marks, Program Desired and the Year of Application (1975, 1976, 1977)

As can be seen from Table III-13, the percentage distribution, by marks, of the university applicants varied considerably from one program to another but not much from one year to another. For example, the percentage of students falling in the higher ranges of marks (70% or above) was much higher for "Science", "Engineering" and "Other Science" programs than for the others. The proportion of students attaining the higher levels of academic performance ($\leq$70%) was greater in the non-strike boards, irrespective of the program desired and the year of application. The pattern of change over the three years (from pre-strike to post-strike) showed some variation from one program to another and also between the two sets of boards within each program type. The variation, however, appears to be random except for the following noteworthy comparison within the 70% to 79% marks ranges.

In the strike boards, the percentage of students falling in the 70% to 79% average marks range decreased from 1975 to 1976 and then increased in 1977 among the applicants for Engineering, Physical Education, Commerce and Business

Pattern of Change in the Percentage of Students
Falling in the Range of 70 to 79% Average Marks by Program Desired

Program Desired	Pre-	Strike	Post	Pre-	Strike	Post	Pre-	Strike	Post
Engineering	31.1	27.5	31.6				32.9	33.2	34.3
	(Strike Boards)						(Non-Strike Boards)		
Physical Education	27.6	23.3	26.1						
	(Strike Boards)								
	27.4	24.5	29.3						
	(Non-Strike Boards)								
Commerce and Business	29.0	26.7	35.7	31.5	31.6	31.0			
	(Strike Boards)			(Non-Strike Boards)					
Other Science	30.4	28.9	30.5				32.5	32.8	33.6
	(Strike Boards)						(Non-Strike Boards)		

and Other Sciences university programs. Except for applicants to Physical Education programs, the pattern of change in the average marks of applicants from the other boards in Ontario (combined) was altogether different over these years.

The percentage of students attaining honours level (≥80%) academic performance did not show much variation from the pre-strike to the post-strike year for applicants to any program of study. This was true of both strike and non-strike boards. These comparisons suggest that there was a relationship between the student's level of academic performance and his/her performance in the strike year (as indicated by the weighted average of his/her Grade 13 final marks), but that this was true only for students in the "above average but not excellent" (70 to 79%) achievement level group preparing for (desiring to enroll in) engineering, commerce and business and other science programs--in other words in programs which emphasize mathematics and such academic disciplines as science which have content of a cumulative learning/hierarchical conceptual structure. Students' competitive positions seem to have been affected in the kind of subject where the secondary school level of study represents basic learning of the discipline and to understand one type of concept or perform one kind of calculation one must thoroughly understand the concept and technique on which it "rests". The humanities generally are not of this nature. In order to understand 19th Century English History it is not necessary first to study in systematic detail all aspects of Tudor England, England of the Stuarts, etc., etc.[11] In these subjects performance on a specific set of examinations is not crucially dependent upon covering all the specific course content.

To express this finding in different words: It would seem that the secondary school teachers' strikes of 1975/76 might well have had a *differential* effect on students of various achievement levels preparing for *different* programs of university study. There is some marks evidence that the above average student of the strike boards (particularly those in the range of 70%-79%--i.e., "good but not brilliant", solid high B but not of first class honours calibre) applying for programs which have a strong emphasis on maths (engineering, business and commerce) and the physical sciences (other sciences) were adversely affected in the strike year.

In Table III-14 we show the means and standard deviations of the final weighted average Grade 13 marks of the university applicants by the program desired, year of application and board category (strike *vs.* non-strike). The mean average marks of students from the non-strike boards were consistently higher than those of applicants from the strike boards for each program of study (except the programs designated as "other"). But this is the case whatever the year of application.

Comparison of the overall mean for the three years shows that the students applying for university engineering programs ranked top in the mean scores; they were followed by students applying for science, other science and nursing programs in a descending order. But this was true of both the strike and non-strike set of boards. The rank order by program was as follows:

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[11] Even though in assessing some aspects of England's development in that century it would be useful to study earlier periods.

Programs Rank Ordered on the Mean of the Weighted Average Marks of Applicants by Board Category

Rank	Program	Strike Boards	Non-Strike Boards
1.	Engineering	72.34	74.22
2.	Science	71.82	73.88
3.	Other Science	71.73	72.73
4.	Nursing	69.94	71.59
5.	Other Arts	69.18	69.95
6.	Arts	68.98	69.84
7.	Commerce and Business	68.69	69.08
8.	Other	66.25	64.89
9.	Physical Education	65.53	66.23

Three-way ANOVA was applied to ascertain the significance of the variance introduced by:

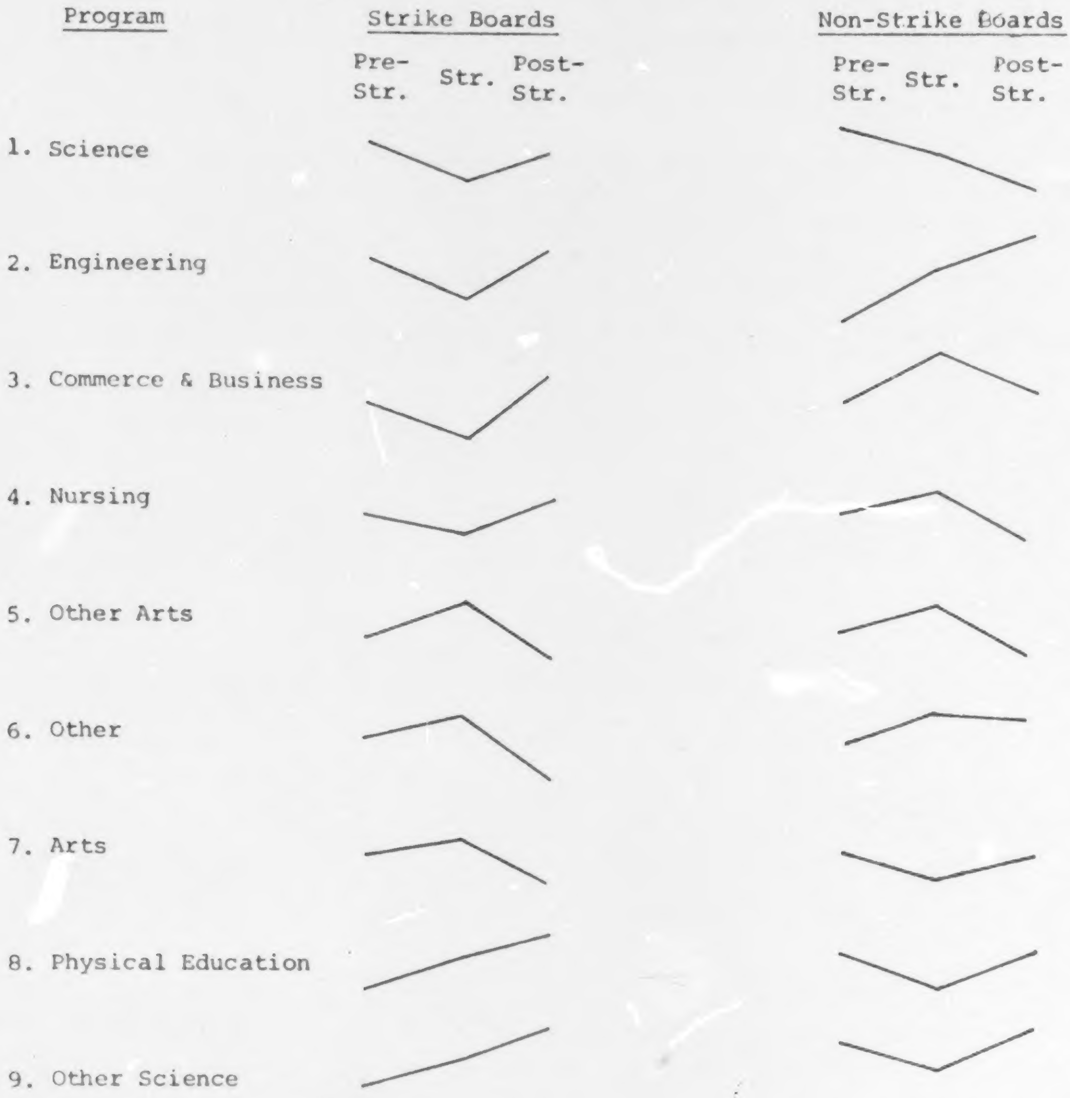
a) board category (strike *vs.* non-strike)
b) year of application (prestrike/strike/post-strike)
c) program desired

and the interactions between (among) these variables. As can be seen from Table III-15, the mean differences between the two school board categories and among programs desired (applied for) were highly significant ($p < .000$) but the variance introduced by year of application (pre-strike *vs.* strike *vs.* post-strike) was not statistically significant.

Two-way interactions between (a) board category and program desired ($p \leq .01$) were statistically significant. The three-way interaction among these variables was also highly significant ($p < .001$).

The significance of these interactions becomes evident when we look at the patterns of change occurring in the means of the average marks, which are depicted on the following page:

Patterns of Change in Mean Scores of University Applicants by Program Desired and School Board Category (Strike/Non-Strike)[12]



The patterns of change, indicated by the direction of change in mean scores from the pre-strike to the post-strike year, show more variation by type of board (strike *vs.* non-strike) than by the program being applied for.

The pattern of change was similar for both sets of boards (mean scores showed an increase from the pre-strike to the strike year followed by a decrease in the post-strike year) for the applicants to only two programs of study, "other arts" and the program(s) designated as "other". The mean of the average marks of strike board applicants who were seeking admission to programs in science, engineering, commerce and business and nursing first decreased in 1976 and then increased in the post-strike year. For these programs of study, the pattern of change in the marks of applicants from the non-strike boards was altogether different. The means of their applicants' average marks were actually highest in the strike year (rising from 1975 to 1976 and then falling). This was the case for all these programs except for applicants to "science". For the remaining three programs (i.e., "arts", "physical education" and "other science") the patterns of change in average marks differed by board but remained consistent for the non-strike boards (a decrease in mean scores from the pre-strike to the strike year was followed by an increase the next year). For strike boards, the mean scores rose from 1975 to 1976 for applicants to physical education and other science programs and decreased for those desiring admission into "arts" programs.

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[12] Based upon the data of Table III-14.

Having looked at the marks record in some detail, we must conclude that although variation has been statistically demonstrated we have profound mistrust of the statistical record. The validity of any conclusion about effects on achievement as indicated by non-standardized marks such as these is open to serious question.

TABLE III-1

RATIOS OF GRADUATES REPORTED TO GRADE 13 ENROLMENT (R_1), SCHOLARS TO GRADUATES REPORTED (R_2), SCHOLARS TO GRADE 13 ENROLMENT (R_3) AND THE CORRESPONDING "Z" VALUES BY SCHOOL BOARD FOR THE PRE-STRIKE (1974-75) AND STRIKE (1975-76) YEARS

School Board #	Year of Graduation	Grade 13 Enrollment (1) N	Graduates Reported (2) N	Scholars (3) N	R_1 (2 + 1)	Z_1	R_2 (3 + 2)	Z_2	R_3 (3 + 1)	Z_3
01	Pre-Strike	38	28	8	.74	.33	.29	2.21*	.21	2.08*
	Strike	39	30	2	.77		.07		.05	
02	Pre-Strike	567	368	76	.65	2.66**	.21	.30	.13	1.10
	Strike	695	400	79	.58		.20		.11	
03	Pre-Strike	2,309	1,683	330	.73	5.41**	.20	1.65	.14	.00
	Strike	2,340	1,534	337	.66		.22		.14	
04	Pre-Strike	138	78	13	.57	2.62**	.17	1.30	.09	.30
	Strike	133	54	14	.41		.26		.11	
05	Pre-Strike	3,279	2,938	684	.90	9.56**	.23	1.43	.21	.61
	Strike	3,544	2,885	718	.81		.25		.20	
06	Pre-Strike	503	348	75	.69	.11	.22	.23	.15	.19
	Strike	538	374	78	.70		.21		.14	
07	Pre-Strike	2,594	2,041	463	.79	1.83	.23	1.95	.18	1.42
	Strike	2,537	1,942	492	.77		.25		.19	
08	Pre-Strike	3,504	2,257	534	.64	3.40**	.24	1.22	.15	.00
	Strike	3,478	2,103	531	.61		.25		.15	
09[1]	Pre-Strike	990	741	202	.75	1.14	.27	.09	.20	.00
	Strike	1,063	772	212	.73		.28		.20	
10	Pre-Strike	617	451	78	.73	4.74**	.17	1.34	.13	.00
	Strike	730	457	95	.61		.21		.13	
Sub-Total 1: Strike Boards Combined	Pre-Strike	14,539	10,933	2,463	.75	10.41**	.23	2.97**	.17	.00
	Strike	15,117	10,551	2,558	.70		.24		.17	
Sub-Total 2: Ontario Total *Less* Sub-total 1	Pre-Strike	36,535	25,191	6,834	.69	6.35**	.27	.31	.19	1.10
	Strike	39,024	25,391	7,178	.65		.28		.18	
	Post-Strike									
Ontario Total	Pre-Strike	51,074	36,124	9,297	.71	10.98**	.26	1.82	.18	.00
	Strike	54,141	35,948	9,736	.66		.27		.18	
	Post-Strike	55,513	36,868	9,748	.66		.26		.18	

[1] This school board was affected by the teachers' strike during the pre-strike (1974-75) year as well.

* Significant at the .05 level.

** Significant at or beyond the .01 level.

TABLE III-2

RATIO OF 1976 UNIVERSITY APPLICANTS TO GRADE 13 ENROLMENT (R_1), UNIVERSITY REGISTRANTS TO APPLICANTS (R_2), AND UNIVERSITY REGISTRANTS TO GRADE 13 ENROLMENT (R_3) BY SCHOOL BOARD COMPARED WITH SIMILAR STATISTICS FOR THE PRE-STRIKE (1975) AND POST-STRIKE (1977) YEARS

School Board #	Number of Schools	1 Grade 13 Enrollment		2 University Applicants		3 University Registrants		2÷1		3÷2		3÷1	
		Sept.	N	Year	N	Year	N	R_1	Z_1	R_2	Z_2	R_3	Z_3
01	1	1974	38	1975	18	1975	12	.47	.57	.67	.32	.32	.63
		1975	39	1976	21	1976	15	.54	1.46	.71	.72	.38	1.54
		1976	40	1977	15	1977	9	.38		.60		.23	
02	3	1974	567	1975	406	1975	279	.72	3.43**	.69	.27	.49	2.04*
		1975	695	1976	434	1976	302	.62	.80	.70	1.95*	.43	1.99*
		1976	653	1977	394	1976	249	.60		.63		.38	
03	17	1974	2309	1975	1602	1975	1131	.69	.14	.71	.78	.49	.50
		1975	2340	1976	1628	1976	1129	.69	4.26**	.69	.27	.48	2.99**
		1976	2451	1977	1563	1977	1077	.64		.69		.44	
04	1	1974	138	1975	76	1975	38	.55	2.63**	.50	3.07**	.28	.46
		1975	133	1976	52	1976	40	.40	1.56	.77	.59	.30	.86
		1976	149	1977	72	1977	52	.48		.72		.35	
05	19	1974	3279	1975	3078	1975	2310	.94	9.05**	.75	4.97**	.70	8.48**
		1975	3544	1976	3099	1976	2150	.87	.95	.69	.50	.61	.01
		1976	3591	1977	3113	1977	2178	.87		.70		.61	
06	5	1974	503	1975	313	1975	231	.62	.05	.74	.22	.46	.18
		1975	538	1976	334	1976	244	.62	.16	.73	.27	.45	.00
		1976	523	1977	319	1977	236	.61		.74		.45	
07	16	1974	2594	1975	1836	1975	1299	.71	.61	.71	.28	.50	.18
		1975	2537	1976	1776	1976	1264	.70	3.97**	.71	1.99*	.50	4.11**
		1976	2783	1977	1806	1977	1230	.65		.68		.44	
08	22	1974	3504	1975	2445	1975	1654	.70	1.55	.68	2.02*	.47	2.55*
		1975	3599	1976	2367	1976	1536	.66	5.33**	.65	1.31	.43	2.08*
		1976	3853	1977	2304	1977	1553	.60		.67		.40	
09	9	1974	990	1975	750	1975	593	.76	.74	.79	1.29	.60	.47
		1975	1063	1976	820	1976	626	.77	1.74	.76	1.35	.59	2.16*
		1976	986	1977	728	1977	534	.74		.73		.54	
10	5	1974	617	1975	443	1975	305	.72	3.32**	.69	.75	.49	2.70**
		1975	750	1976	475	1976	316	.63	.02	.67	.42	.42	.31
		1976	740	1977	469	1977	306	.63		.65		.41	
Sub-total 1: School Boards Combined	97	1974	14,539	1975	10,967	1975	7852	.76	5.16**	.72	3.81**	.54	6.18**
		1975	15,238	1976	11,006	1976	7622	.72	7.41**	.69	.00	.50	5.67**
		1976	15,769	1977	10,783	1977	7424	.68		.69		.47	
Sub-total 2: Ontario Total Less Sub-Total 1	513	1974	36,535	1975	26,696	1975	19,495	.73	.60	.73	2.34*	.53	1.38
		1975	38,903	1976	28,439	1976	21,019	.73	5.71**	.74	4.29**	.54	6.98**
		1976	39,744	1977	28,329	1977	20,485	.71		.72		.52	
Ontario Total: All Secondary School Boards Combined	611	1974	51,074	1975	37,663	1975	27,347	.74	3.25**	.73	.00	.54	2.09*
		1975	54,141	1976	39,445	1976	28,641	.73	8.82**	.73	1.49	.53	8.70**
		1976	55,513	1977	39,112	1977	27,909	.76		.71		.50	

[1] Total number of university registrants for September 1976 is assumed to be equal to the number of students who have accepted offer of admission for the 1976-77 academic year.

[2] Three schools (CONTACT, Education Centre Toronto and MAGU) in Metropolitan Toronto were not included because comparable data on Grade 13 enrolment were missing for the three years under study.

* Significant at the .05 level.

** Significant at or beyond the .01 level.

TABLE III-3

RATIOS OF 1976 UNIVERSITY APPLICANTS TO GRADE 13 ENROLMENT (R_1), UNIVERSITY REGISTRANTS TO APPLICANTS (R_2), AND UNIVERSITY REGISTRANTS TO GRADE 13 ENROLMENT (R_3) BY TYPE OF SCHOOL COMPARED WITH SIMILAR STATISTICS FOR THE PRE-STRIKE (1975) AND POST-STRIKE (1977) YEARS

Type of School	Number of Schools	1 Grade 13 Enrollment Sept.	N	2 University Applicants Year	N	3 University Registrants[1] Year	N	2÷1 R_1	Z_1	3÷2 R_2	Z_2	3÷1 R_3	Z_3
Collegiate Institute	51	1974	8955	1975	6750	1975	4792	.75	2.54*	.71	2.50**	.54	3.61**
		1975	9103	1976	6704	1976	4627	.74	9.00**	.69	.57	.51	5.24
		1976	9354	1977	6324	1977	4394	.68		.69		.47	
Collegiate Inst. and Vocational School	5	1974	532	1975	320	1975	220	.60	.97	.69	1.83	.41	.58
		1975	564	1976	323	1976	243	.57	.24	.75	.35	.43	.05
		1976	538	1977	312	1977	231	.58		.74		.43	
High School	2	1974	271	1975	164	1975	114	.61	.99	.70	1.70	.42	1.89
		1975	296	1976	191	1976	148	.65	1.41	.77	2.42*	.50	2.72**
		1976	365	1977	216	1977	144	.59		.67		.39	
High/Secondary School of Commerce	3	1974	141	1975	89	1975	56	.63	.73	.63	.14	.40	.36
		1975	146	1976	86	1976	55	.59	1.24	.64	1.06	.38	.11
		1976	194	1977	127	1977	72	.65		.57		.37	
Secondary School	28	1974	3908	1975	3279	1975	2465	.84	8.25**	.75	4.67**	.63	8.63**
		1975	4428	1976	3395	1976	2379	.77	.35	.70	1.17	.54	1.15
		1976	4572	1977	3491	1977	2401	.76		.69		.53	
Technical School	2	1974	305	1975	130	1975	72	.43	1.60	.55	.64	.24	.73
		1975	280	1976	99	1976	59	.35	1.40	.59	.06	.21	.95
		1976	317	1977	95	1977	57	.30		.60		.18	
Technical and Commercial School	1	1974	97	1975	62	1975	32	.64	1.71	.52	.27	.33	.16
		1975	102	1976	53	1976	26	.52	1.03	.49	.28	.25	.81
		1976	98	1977	58	1977	30	.59		.52		.31	
Other Alternatives:[2]													
Adult Day School	1	1974	131	1975	40	1975	25	.31	.64	.62	1.33	.19	1.29
		1975	121	1976	32	1976	15	.26	.14	.47	[illegible]	.12	[illegible]
		1976	136	1977	37	1977	21	.27		.57		.15	
Alternate and Independent Study Program	1	1974	55	1975	49	1975	28	.89	2.19*	.57	.55	.51	.55
		1975	59	1976	43	1976	27	.73	3.48**	.63	.19	.46	1.41
		1976	47	1977	46	1977	28	.98		.61		.61	
School of Experiential Education	1	1974	51	1975	11	1975	5	.22	2.67**	.45	.24	.10	1.84
		1975	37	1976	18	1976	9	.49	1.13	.50	.00	.24	.68
		1976	39	1977	14	1977	7	.36		.50		.18	
Project SEED	1	1974	30	1975	15	1975	5	.50	.44	.33	.63	.17	.32
		1975	25	1976	11	1976	5	.44	1.07	.45	.67	.20	.17
		1976	33	1977	10	1977	6	.30		.60		.18	
Subway Academy	1	1974	16	1975	9	1975	5	.56	1.91	.56	1.29	.31	2.10**
		1975	20	1976	5	1976	1	.25	.20	.20	.95	.05	.69
		1976	18	1977	4	1977	2	.22		.50		.17	
Ecole Secondaire	1	1974	47	1975	49	1975	33	1.04	4.25**	.67	.66	.70	2.17*
		1975	57	1976	46	1976	28	.81	.53	.61	.24	.49	.46
		1976	58	1977	49	1977	31	.84		.63		.53	
Sub-total 1: School Boards Combined	98	1974	14,539	1975	10,967	1975	7852	.76	5.21**	.72	3.82**	.54	6.22**
		1975	15,238	1976	11,006	1976	7622	.72	7.41**	.69	.65	.50	5.18**
		1976	15,769	1977	10,783	1977	7424	.68		.69		.47	
Sub-total 2: Ontario Total Less Sub-Total 1	513	1974	36,535	1975	26,696	1975	19,495	.73	.60	.73	2.34*	.53	1.38
		1975	38,903	1976	28,439	1976	21,019	.73	5.71**	.74	4.29**	.54	6.98**
		1976	39,744	1977	28,329	1977	20,485	.71		.72		.52	
Ontario Total: All Secondary School Boards Combined	611	1974	51,074	1975	37,663	1975	27,347	.74	3.25**	.73	.00	.54	2.09*
		1975	54,141	1976	39,445	1976	28,641	.73	[illegible]	.73	.49	.53	6.70**
		1976	55,513	1977	39,112	1977	27,909	.70		.71		.50	

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[1] Total number of university registrants for September 1976 is assumed to be equal to the number of students who have accepted offer of admission for the 1976-77 academic year.

[2] Three schools (CONTACT, Education Centre Toronto and MAGU) in Metropolitan Toronto were not included because comparable data on Grade 13 enrolment were missing for the three years under study.

* Significant at the .05 level.

** Significant at or beyond the .01 level.

TABLE III-4

PATTERN[1] OF CHANGE IN RATIO OF UNIVERSITY REGISTRANTS TO GRADE 13 ENROLLMENT (R_1), UNIVERSITY REGISTRANTS TO APPLICANTS (R_2) AND UNIVERSITY REGISTRANTS TO GRADE 13 ENROLLMENT (R_3) BY SCHOOL BOARD FROM PRE-STRIKE (1975) TO POST-STRIKE (1977) YEAR

Ratio[2] Pattern of Change School Board #	R_1: University Applicants to Grade 13 Enrollment				R_2: University Registrants to Applicants				R_3: University Registrants to Grade 13 Enrollment			
	Pre Post Str. Pre Post	Pre Str. Post	Str. Pre Post	Pre Str. Post	Pre Post Str. Pre Post	Pre Str. Post	Str. Pre Post	Pre Str. Post	Pre Post Str. Pre Post	Pre Str. Post	Str. Pre Post	Pre Str. Post Str. Pre
01	-	-	47 54 38	-	-	-	67 71 60	-	-	-	32 38 23	-
02	-	72 62 60	-	-	-	-	69 70 63	-	-	49 43 38	-	-
03	-	-	-	69 69 64	71 69 69	-	-	-	-	49 48 44	-	-
04	55 40 48	-	-	-	-	-	50 7[illegible] 72	-	-	-	-	28 30 35
05	94 87 87	-	-	-	75 69 60	-	-	-	70 61 61	-	-	-
06	-	-	-	62 62 61	74 73 74	-	-	-	46 45 45	-	-	-
07	-	71 70 65	-	-	-	-	-	71 71 68	-	-	-	50 50 44
08	-	70 66 60	-	-	68 65 67	-	-	-	-	47 43 40	-	-
09	-	-	76 77 74	-	-	79 76 73	-	-	-	60 59 54	-	-
10	-	-	-	72 63 63	-	69 67 65	-	-	-	49 42 41	-	-
Strike Boards Combined		76 72 68			72 69 69	-	-	-		54 50 47	-	-
Non-Strike Boards	-	-	-	73 73 71	-	-	73 74 72	-	-	-	53 54 52	
Ontario Total	-	74 73 71	-	-	-	-	-	73 73 71	-	54 53 50	-	-

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[1] Based on Data shown in Table III-2.

[2] Decimal Omitted.

TABLE III-5

PATTERN[1] OF CHANGE IN RATIO OF UNIVERSITY APPLICANTS TO GRADE 13 ENROLLMENT (R_1), UNIVERSITY REGISTRANTS TO APPLICANTS (R_2) AND UNIVERSITY REGISTRANTS TO GRADE 13 ENROLLMENT (R_3)[1] BY TYPE OF SCHOOL FROM PRE-STRIKE (1975) TO POST-STRIKE (1977) YEAR

Ratio[2] Pattern of change Type of School	R_1: University Applicants to Grade 13 Enrollment				R_2: University Registrants to Applicants				R_3: University Registrants to Grade 13 Enrollment			
	Pre Post Strike	Pre Strike Post	Strike Pre Post	Pre Strike Post	Pre Post Str. Pre Str. Post	Pre Strike Post	Strike Pre Post	Other 2 1 1	Pre Post Strike	Pre Strike Post	Strike Pre Post	Strike Post Pre
1. C I	-	75 74 68	-	-	71 69 69	-	-	-	-	54 51 47	-	-
2. C & VS	60 57 58	-	-	-	-	-	69 75 74	-	-	-	-	41 43 43
3. H S	-	-	61 65 59	-	-	-	70 77 67	-	-	42 50 39	-	-
4. H/S S of C	63 59 65	-	-	-	-	-	63 64 57	-	-	40 38 37	-	-
5. S S	84 77 76	-	-	-	-	75 70 69	-	-	-	63 54 53	-	-
6. T S	-	43 35 30	-	-	-	-	-	55 59 60	-	24 21 18	-	-
7. T & C S	64 52 59	-	-	-	52 49 52	-	-	-	33 25 31	-	-	-
Other Alternatives												
8.	31 26 27	-	-	-	62 47 57	-	-	-	19 12 15	-	-	-
9.	89 13 98	-	-	-	-	-	57 63 61	-	51 46 61	-	-	-
10.	-	-	22 49 36	-	-	-	-	45 50 50	-	-	10 24 18	-
11.	-	50 44 30	-	-	-	-	-	33 45 60	-	-	17 20 18	-
12.	-	56 25 20	-	-	56 20 50	-	-	-	31 05 17	-	-	-
13.	10 81 84	-	-	-	67 61 63	-	-	-	70 49 53	-	-	-
School types/ Strike Boards Combined	-	76 72 68	-	-	72 69 69	-	-	-	-	54 50 47	-	-
Non-Strike Boards	-	-	-	73 73 71	-	-	73 74 72	-	-	-	53 54 52	-
Ontario Total	-	74 73 69	-	-	-	-		73 73 7	-	54 53 50	-	-

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[1] Based on data shown on Table III.5

[2] Decimal omitted.

TABLE III-6

PATTERN[1] OF CHANGE IN TRANSITION RATIOS, COMBINING SCHOOL BOARD AND TYPE OF SCHOOL DISTRIBUTIONS[1] TOGETHER

Mode of Classification		School Board			Type of School			School Board & Type of School Combined		
Pattern of Change	Frequency / Ratio	R_1	R_2	R_3	R_1	R_2	R_3	R_1	R_2	R_3
A Decreased from pre-strike to strike year and then increased on A_1 remained unchanged in the post-strike year	Observed: O Expected: E O-E $(O-E)^2/E$	2	4	2	7	5	5	9 5.75 3.25 1.8369	9 5.75 3.25 1.8369	7 5.75 1.25 .2717
B Continued decreasing from the pre-strike through the strike to the post-strike year	Observed: O Expected: E O-E $(O-E)^2/E$	3	2	5	4	1	5	7 5.75 1.25 .2717	3 5.75 2.75 1.31752	10 5.75 4.25 3.1413
C Increased from pre-strike to strike year and then decreased in the post-strike year.	Observed: O Expected: E O-E $(O-E)^2/E$	2	3	1	2	4	2	4 5.75 1.75 .5326	7 5.75 1.25 .2717	3 5.75 2.75 1.3152
D Other sub-patterns	Observed: O Expected: E O-E $(O-E)^2/E$	3	1	2	-	3	1	3 5.75 2.75 1.3152	4 5.75 1.75 .5326	3 5.75 2.75 1.3151
Total	Observed	10	10	10	13	13	13	23	23	23
Chi square (d.f. = 2)	$(O-E)^2/E$							3.9564 N.S.S.	3.9564 N.S.S.	6.0434 p .05

[1] Based on data shown in Tables III-4 and III-5

R_1: University applicants to Grade 13 Enrollment
R_2: University registrants to applicants
R_3: University registrants Grade 13 Enrollment.

TABLE III-7

SCHOOL BOARDS AFFECTED BY TEACHERS' STRIKE COMPARED WITH ONTARIO TOTAL ON RATIOS OF CAAT ENTRANTS TO THE COMBINED ENROLMENT OF GRADES 12 and 13 BY SEX FOR THE PRE-STRIKE (1974-75) AND STRIKE (1975-76) YEARS

School Board #	Number of Schools[1]	Year of Entrance	Male			Female			Total		
			Grs. 12&13 Enrollment (1) N	CAAT Entrants (2) N	Ratio[1] (2)÷(1)	Grs. 12&13 Enrollment (3) N	CAAT Entrants (4) N	Ratio[1] (4)÷(3)	Grs. 12&13 Enrollment (5) N	CAAT Entrants (6) N	Ratio[1] (6)÷(5)
01	1	Pre-strike	78	22	.28	82	27	.33	160	49	.31
		Strike	70	4	.06	85	20	.24	155	24	.15
		Post-strike									
02	1	Pre-strike	780	73	.09	672	96	.14	1452	169	.12
		Strike	855	45	.05	752	48	.06	1607	93	.06
		Post-strike									
03	18	Pre-strike	3257	356	.11	2888	616	.21	6145	972	.16
		Strike	3944	294	.07	2324	344	.15	6268	638	.10
		Post-strike									
04	1	Pre-strike	213	102	.48	218	110	.50	431	212	.49
		Strike	216	29	.13	205	47	.23	421	76	.18
		Post-strike									
05	20	Pre-strike	4671	581	.12	4221	701	.17	8892	1282	.14
		Strike	4805	339	.07	4423	452	.10	9228	791	.09
		Post-strike									
06	6	Pre-strike	881	139	.16	885	260	.29	1766	399	.23
		Strike	839	89	.11	831	137	.16	1670	226	.14
		Post-strike									
07	19	Pre-strike	3762	488	.13	3361	679	.20	7123	1167	.16
		Strike	3900	360	.09	3513	415	.12	7413	776	.10
		Post-strike									
08	26	Pre-strike	4986	395	.08	4181	514	.12	9167	909	.10
		Strike	5104	316	.06	4347	328	.08	9451	644	.07
		Post-strike									
09	11	Pre-strike	1623	335	.21	1577	598	.38	3200	933	.29
		Strike	1795	188	.10	1542	269	.17	3337	457	.14
		Post-strike									
10	6	Pre-strike	945	204	.21	861	238	.28	1815	442	.24
		Strike	1069	119	.11	977	108	.11	2046	227	.11
		Post-strike									
Sub-total 1: Strike Boards Combined	111	Pre-strike	21,205	2,697	.13	18,946	3,837	.20	40,151	6,534	.16
		Strike	22,597	1,783	.08	18,999	2,168	.11	41,596	3,951	.09
		Post-strike									
Sub-total 2: Non-Strike Boards		Pre-strike	59,534	10,934	.18	54,998	16,550	.30	114,338	27,484	.24
		Strike	61,980	5,972	.10	58,747	8,822	.15	120,591	14,794	.12
		Post-strike									
Ontario Total		Pre-strike	80,739	13,627	.17	73,944	20,387	.28	154,683	34,014	.22
		Strike	84,577	7,755	.09	77,746	10,990	.14	162,323	18,745	.12
		Post-strike									

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[1] Including only those schools which contributed to CAAT entrants with SSGD or SSHGD during both years under study.

Note: Comparable data for the post-strike (1976-77)year could not be obtained to complete this report in time.

TABLE III-8

RATIOS OF CAAT ENTRANTS TO THE COMBINED ENROLLMENT OF GRADES 12 AND 13 BY TYPE OF SCHOOL FOR THE PRE-STRIKE (1974-75) AND STRIKE (1975-76) YEARS

Type of School	Number of Schools[1]	Grades 12 & 13 Enrollment (1) Year	N	CAAT Entrants (2) Sept.	N	Ratio (2) ÷ (1)
Collegiate Institute	52	Pre-Strike	22,136	1975	3,099	.14
		Strike	22,623	1976	1,996	.09
Collegiate Institute and Vocational School	5	Pre-Strike	1,831	1975	546	.30
		Strike	1,740	1976	255	.15
High School	8	Pre-Strike	1,056	1975	146	.14
		Strike	1,273	1976	93	.07
High/Secondary School of Commerce	3	Pre-Strike	950	1975	234	.25
		Strike	902	1976	112	.12
Secondary School	36	Pre-Strike	11,940	1975	2,275	.19
		Strike	12,875	1976	1,319	.10
Technical School	2	Pre-Strike	1,206	1975	143	.12
		Strike	1,175	1976	99	.08
Technical and Commercial School	1	Pre-Strike	526	1975	77	.15
		Strike	501	1976	52	.10
Other Alternatives						
Adult Day School	1	Pre-Strike	196	1975	7	.04
		Strike	194	1976	2	.01
Alternate and Independent Study Program	1	Pre-Strike	109	1975	3	.03
		Strike	110	1976	1	.01
School of Experiential Education	1	Pre-Strike	92	1975	4	.04
		Strike	61	1976	-	.00
Ecole Secondaire	1	Pre-Strike	109	1975	-	-
		Strike	142	1976	3	.02
Sub-total 1: Strike Boards Combined	111	Pre-Strike	40,151	1975	6,534	.16
		Strike	41,596	1976	3,932	.09
Sub-total 2: Non-Strike Boards		Pre-Strike	114,338	1975	27,480	.24
		Strike	120,591	1976	14,813	.12
Ontario Total		Pre-Strike	154,683	1975	34,014	.22
		Strike	162,323	1976	18,745	.12

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[1] Including only those schools which contributed to CAAT entrants with SSGD or SSHGD during both years under study.

TABLE III-9

PERCENTAGE DISTRIBUTION OF APPLICANTS TO ONTARIO UNIVERSITIES BY SCHOOL BOARD, SEX AND FINAL WEIGHTED AVERAGE OF GRADE 13 MARKS FOR THE PRE-STRIKE (1975), STRIKE (1976) AND POST-STRIKE (1977) YEARS

chool oard #	Year Of Applying #	Marks Not Reported			Less Than 50%			50% to 59%			60% to 69%			70% to 79%			80% to 89%			90% to 100%			Total		
		M %	F %	T %	M %	F %	T %	M %	F %	T %	M %	F %	T %	M %	F %	T %	M %	F %	T %	M %	F %	T %	M N	F N	T N
01	1975	-	-	-	-	-	-	22.3	11.1	16.7	33.3	22.2	27.8	33.3	-	16.7	11.1	66.7	38.8	-	-	-	9	9	18
	1976	-	8.3	4.8	-	-	-	11.1	8.3	9.5	33.4	16.7	23.8	44.4	41.7	42.8	11.1	25.0	19.1	-	-	-	9	12	21
	1977	-	-	-	-	-	-	-	[illegible]	6.6	-	36.4	26.7	[illegible]	36.4	46.7	25.0	18.1	20.0	-	-	-	4	11	15
02	1975	2.7	1.7	2.2	9.3	1.7	5.9	13.3	11.0	12.3	32.4	34.3	33.8	25.6	[illegible]	27.1	13.8	21.5	17.2	2.2	1.1	2.0	225	181	406
	1976	4.9	2.6	3.9	6.1	3.2	4.8	19.2	6.9	13.8	29.0	30.7	29.8	27.3	35.5	30.9	12.7	19.0	15.4	.8	2.1	1.4	245	189	434
	1977	2.4	1.1	2.0	2.4	1.6	1.8	22.4	12.0	17.5	31.4	32.1	31.7	27.6	33.7	30.5	13.3	15.2	14.2	.5	4.3	2.3	210	184	394
03	1975	2.1	1.4	1.8	3.4	2.1	2.8	17.7	7.6	13.1	36.8	32.2	34.7	22.3	35.5	28.3	15.4	17.6	17.3	2.3	1.6	2.0	877	724	1,601
	1976	4.6	4.6	4.6	5.5	.8	3.4	16.4	7.3	12.3	32.5	30.6	31.6	25.3	35.3	29.9	13.4	19.2	16.0	2.3	2.2	2.2	888	740	1,628
	1977	2.3	1.2	1.8	4.5	1.1	2.9	16.6	9.1	13.1	33.6	33.4	33.5	26.8	34.4	30.4	14.0	19.8	16.7	2.2	1.0	1.6	829	734	1,563
04	1975	4.8	2.9	3.9	9.5	-	5.3	19.0	8.8	14.5	33.4	38.3	35.5	16.7	32.4	23.7	9.5	17.6	13.2	7.1	-	3.9	42	34	76
	1976	8.3	7.1	7.7	-	-	-	8.3	7.1	7.7	16.7	14.3	15.4	50.0	46.5	48.1	12.5	25.0	19.2	4.2	-	1.9	24	28	52
	1977	15.9	3.6	11.1	2.3	-	1.4	2.3	14.3	6.9	25.0	39.2	30.5	29.5	28.6	29.3	25.0	14.3	20.8	-	-	-	44	28	72
05	1975	3.9	4.9	4.3	3.6	2.5	3.1	14.4	7.2	11.0	33.2	25.8	29.8	27.2	36.7	31.6	15.1	20.8	17.8	2.6	2.1	2.4	1,634	1,442	3,076
	1976	4.7	3.7	4.2	5.8	1.6	3.9	14.6	6.8	10.7	30.5	27.1	28.4	27.5	38.4	32.5	13.9	20.2	17.7	3.0	2.2	2.6	1,681	1,418	3,099
	1977	2.5	2.4	2.5	6.1	1.5	3.9	13.5	7.4	10.7	[illegible]	27.2	30.4	26.5	38.7	32.1	15.4	20.6	17.8	3.0	2.2	2.6	1,685	1,428	3,113
06	1975	3.4	2.9	3.2	.6	1.5	1.0	19.9	4.4	12.1	31.8	25.5	29.9	28.4	39.4	33.3	13.1	23.4	17.6	2.8	2.9	2.9	176	137	313
	1976	2.0	2.2	2.1	.7	-	.3	17.4	5.4	10.8	34.3	34.1	34.1	26.8	39.4	33.8	14.8	17.3	16.2	4.0	1.6	2.7	149	185	334
	1977	4.0	2.3	3.1	2.3	.6	1.2	8.0	8.5	8.3	29.7	25.3	27.1	30.9	34.7	33.3	20.0	26.1	23.0	5.1	2.5	4.0	175	176	351
07	1975	4.1	1.2	2.7	3.2	.6	2.0	11.7	6.3	7.2	33.1	28.7	31.2	29.2	38.2	33.4	16.4	22.9	21.3	2.3	2.1	2.2	1,007	826	1,833
	1976	5.2	2.9	1.2	2.6	.5	1.6	10.5	6.0	8.5	35.2	26.3	31.1	27.9	37.1	32.9	16.6	23.5	21.9	2.0	3.7	2.8	962	814	1,776
	1977	1.9	1.2	1.5	4.1	1.3	2.8	14.2	7.7	11.1	30.4	29.0	29.7	29.6	34.9	32.1	17.1	23.7	20.4	2.7	2.2	2.4	964	918	1,882
08	1975	6.2	5.0	5.7	7.4	3.1	5.5	15.9	9.9	13.2	27.5	28.7	28.1	24.1	33.3	28.1	14.7	17.2	15.8	4.2	2.8	3.6	1,362	1,080	2,442
	1976	8.0	5.4	6.9	9.0	4.6	7.1	15.2	11.0	13.4	27.4	27.9	27.6	21.4	32.5	26.2	15.8	16.2	15.9	3.2	2.4	2.9	1,366	1,001	2,367
	1977	2.4	3.2	2.7	7.6	2.8	5.5	14.3	11.3	12.5	30.7	27.4	29.3	26.3	34.9	30.7	14.7	17.9	15.8	4.0	2.5	3.5	1,258	1,046	2,304
09	1975	4.9	5.9	5.3	4.5	2.2	3.5	16.5	5.9	11.9	28.2	22.0	25.5	26.8	37.7	31.6	14.4	22.6	17.9	4.7	3.7	4.3	425	323	748
	1976	2.6	4.5	3.5	5.0	1.8	3.4	16.6	8.8	12.8	34.8	36.6	30.9	21.8	31.7	26.6	16.6	23.1	19.8	2.6	3.5	3.0	422	398	820
	1977	5.0	5.2	5.1	7.2	1.9	4.9	16.0	9.0	13.1	29.9	30.6	30.2	26.1	34.3	29.5	14.4	16.1	15.1	1.4	2.9	2.1	418	310	728
10	1975	2.5	4.0	3.2	7.0	1.0	4.3	16.0	17.1	11.9	32.7	29.6	31.4	27.0	27.7	31.8	11.1	18.6	14.5	3.7	2.0	2.9	244	199	443
	1976	3.3	3.0	3.2	5.9	3.4	4.8	13.6	10.3	12.2	31.6	36.9	33.9	27.2	30.1	28.4	15.8	15.8	15.8	2.6	.5	1.7	272	203	475
	1977	2.0	1.8	1.9	10.8	1.8	6.6	17.7	12.7	15.4	27.3	33.2	30.2	22.9	34.6	28.3	17.3	13.2	15.3	2.0	2.7	2.3	249	220	469
rike ards mbined	1975	4.1	3.6	4.0	4.7	2.1	3.5	15.1	7.7	11.7	32.0	28.1	30.3	26.1	35.9	30.4	15.2	20.1	17.4	2.8	2.5	2.7	6,001	4,955	10,956
	1976	5.2	4.0	4.7	5.8	2.0	4.1	14.7	7.9	11.6	31.1	28.3	29.6	25.5	35.7	30.1	15.1	20.0	17.1	2.5	2.1	2.4	6,018	4,988	11,006
	1977	2.6	2.3	2.5	5.9	1.7	3.9	14.7	8.9	11.9	31.5	29.1	30.4	27.1	35.9	31.2	15.3	19.9	17.5	2.9	2.2	2.6	5,836	5,055	10,891
n-Strike ards	1975	4.3	3.6	4.0	2.4	.9	1.8	11.8	5.5	8.9	33.5	28.3	30.9	28.3	37.2	32.5	16.5	21.8	19.0	3.2	2.7	2.9			
	1976	3.9	2.9	3.4	2.8	1.2	2.0	11.9	6.7	9.5	33.1	29.1	31.2	25.8	36.8	32.5	19.5	20.8	18.6	3.0	2.6	2.8			
	1977	3.3	2.3	2.8	3.1	1.1	2.1	12.9	7.5	10.2	32.0	28.6	30.4	28.7	37.1	32.7	17.3	20.8	19.0	2.8	2.6	2.8			

TABLE III-10

MEANS AND STANDARD DEVIATIONS OF WEIGHTED AVERAGE OF GRADE 13 FINAL MARKS OF UNIVERSITY APPLICANTS BY SEX AND YEAR OF APPLICATION FOR SCHOOL BOARDS AFFECTED BY TEACHERS' STRIKE

School Board #	Year of Application	Male			Female			Total			[1] F (d.f.=1)	[2] F (d.f.=2)
		N	Mean	SD	N	Mean	SD	N	Mean	SD		
01	Pre-strike	9	68.89	11.31	9	76.22	12.08	18	72.56	11.96	.38	.14
	Strike	9	70.00	7.92	9	73.03	9.32	18	71.70	8.64		
	Post-strike	4	76.00	6.06	11	70.73	7.69	15	72.13	7.48		
02	Pre-strike	219	67.32	12.86	178	70.31	10.55	397	68.66	11.96	*** 35.31	.08
	Strike	233	66.74	11.60	184	71.36	9.89	417	68.78	11.11		
	Post-strike	205	67.18	10.54	182	71.04	10.40	387	68.99	10.63		
03	Pre-strike	859	67.84	11.16	714	71.27	9.35	1573	69.40	10.51	*** 133.47	.17
	Strike	847	67.69	11.46	706	71.85	9.27	1553	69.58	10.72		
	Post-strike	810	68.12	11.05	725	71.13	9.35	1535	69.54	10.39		
04	Pre-strike	40	65.48	12.87	33	69.97	8.78	73	67.51	11.36	.46	** 5.77
	Strike	22	73.59	10.01	26	74.46	7.91	48	74.06	8.84		
	Post-strike	37	71.78	10.01	27	69.48	7.91	64	70.81	9.18		
05	Pre-strike	1571	68.76	11.04	1371	71.98	10.11	2942	70.26	10.74	*** 247.28	.33
	Strike	1602	68.16	12.23	1366	72.13	9.47	2968	69.98	11.22		
	Post-strike	1643	68.43	12.03	1394	72.14	9.64	3037	70.13	11.15		
06	Pre-strike	170	68.65	10.36	133	73.36	9.35	303	70.72	10.19	*** 23.78	4.07
	Strike	146	69.31	10.54	181	72.26	8.38	327	70.94	9.51		
	Post-strike	168	71.94	11.05	172	73.64	9.64	340	70.80	10.38		
07	Pre-strike	968	69.68	10.96	816	72.72	9.21	1784	71.07	10.30	*** 135.71	2.69
	Strike	912	69.80	10.71	790	73.49	9.34	1702	71.51	10.26		
	Post-strike	946	69.25	11.51	907	72.42	9.60	1853	70.81	10.73		
08	Pre-strike	1277	67.87	13.19	1028	70.68	10.66	2305	69.12	12.21	*** 79.09	3.60
	Strike	1257	67.27	13.60	947	69.69	11.33	2204	68.31	12.73		
	Post-strike	1228	68.01	12.83	1013	70.78	10.64	2241	69.26	11.97		
09	Pre-strike	404	68.99	11.97	304	73.18	10.13	708	70.79	11.40	*** 71.23	* 4.41
	Strike	411	67.90	11.56	380	72.24	10.42	791	69.99	11.23		
	Post-strike	397	67.48	11.85	294	71.13	10.28	691	69.03	11.35		
10	Pre-strike	238	67.23	11.99	191	71.77	9.13	429	69.25	11.03	*** 17.27	2.14
	Strike	264	68.12	12.25	197	69.14	10.51	461	68.55	11.54		
	Post-strike	244	66.70	13.40	217	69.06	11.13	461	67.81	12.43		
Strike Boards Combined	Pre-strike	5755	68.45	11.74	4777	71.75	9.96	10532	69.95	11.09		
	Strike	5703	68.13	12.11	4786	71.71	10.06	10489	69.76	11.33		
	Post-strike	5682	68.37	11.97	4942	71.56	9.96	10624	69.86	11.20		

[1] F ratio pertaining to the significance of variance introduced by sex.

[2] F ratio pertaining to the significance of the variance introduced by year of application.

* Significant at or beyond .05 level.

** Significant at or beyond the .01 level.

*** Significant at or beyond the .000 level.

TABLE III-11

TWO-WAY ANALYSIS OF VARIANCE OF FINAL WEIGHTED AVERAGE MARKS OF UNIVERSITY APPLICANTS (1975-77) BY SCHOOL BOARD AND SEX

Source of Variation	d.f.	Mean Square	F	Significance of F
Main Effects:	10	3018.394	24.77	.000
School Board	9	2347.660	19.27	.000
Sex	1	88253.625	67.74	.000
Interaction between Board & Sex	9	187.492	1.54	.128
Explained	19	5828.207	47.84	.000
Residual	31,627	121.835		
Total	31,646	125.261		

TABLE III-12

TWO-WAY ANALYSIS OF VARIANCE OF FINAL WEIGHTED AVERAGE MARKS OF UNIVERSITY APPLICANTS (1975-77) BY SCHOOL BOARD AND YEAR OF APPLICATION

Source of Variation	d.f.	Mean Square	F	Significance of F
Main Effects:	11	2075.005	16.67	.000
School Board	9	50.911	20.29	.000
Year of Application	2	2525.751	.41	.664
Interaction between Board & Year of Appl.	18	292.608	2.35	.000
Explained	29	968.310	7.78	.000
Residual	31,617	124.488		
Total	31,646	125.261		

TABLE III-13

STRIKE BOARDS COMPARED WITH NON-STRIKE BOARDS ON PERCENTAGE DISTRIBUTION OF APPLICANTS TO ONTARIO UNIVERSITIES BY WEIGHTED AVERAGE OF GRADE 13 FINAL MARKS AND PROGRAM DESIRED FOR THE PRE-STRIKE (1975), STRIKE (1976) AND POST-STRIKE (1977) YEARS

Program Desired (Applied for)	Year Of Applying	Marks Not Reported		Less Than 50%		50% to 59%		60% to 69%		70% to 79%		80% to 89%		90% to 100%		Total	
		Strike Boards %	Non-Strike Boards %	Strike Boards %	Non-Strike Boards %	Strike Boards %	Non-Strike Boards %	Strike Boards %	Non-Strike Boards %	Strike Boards %	Non-Strike Boards %	Strike Boards %	Non-Strike Boards %	Strike Boards %	Non-Strike Boards %	Strike Boards N	Non-Strike Boards N
Arts	1975	3.8	4.3	3.2	1.7	12.5	9.1	34.4	34.6	31.3	33.6	13.7	15.3	1.1	1.4	4,695	9,796
	1976	4.5	3.1	3.9	1.9	13.0	10.3	33.0	35.7	31.0	33.8	14.0	14.0	1.2	1.2	4,543	10,406
	1977	2.2	2.2	4.0	1.7	13.1	11.1	34.7	35.6	31.5	33.2	13.4	14.9	1.1	1.3	4,677	10,140
Science	1975	4.3	2.4	3.8	1.4	9.2	6.6	24.8	23.9	28.5	32.1	23.5	27.6	5.9	6.0	2,234	5,110
	1976	3.9	2.0	4.2	1.6	10.8	6.6	24.3	24.2	30.4	32.7	21.2	27.2	5.2	5.7	2,220	5,276
	1977	2.2	1.7	4.4	1.8	10.1	[illegible]	23.8	23.6	30.8	32.5	23.6	27.4	5.1	5.2	2,110	5,100
Engineering	1975	2.7	1.7	4.0	1.8	8.9	7.6	22.4	23.6	31.1	32.9	25.0	26.9	5.9	5.5	1,014	2,559
	1976	5.6	2.2	5.3	1.6	9.8	6.8	21.6	21.1	27.5	33.2	25.9	29.1	4.3	6.0	1,048	2,730
	1977	1.2	2.0	4.4	2.2	9.2	6.9	20.9	20.1	31.6	34.3	26.9	28.3	5.8	6.2	1,016	2,715
Phys. Ed.	1975	3.1	3.0	6.0	3.0	18.8	14.8	38.9	45.2	27.6	27.4	5.4	6.1	.2	.5	447	1,627
	1976	4.5	2.7	3.1	3.1	19.0	18.9	43.7	43.9	23.3	24.5	6.4	6.7	-	.2	485	1,734
	1977	.9	2.4	3.6	3.3	18.4	16.6	43.9	41.2	26.1	29.3	6.4	7.1	.7	.1	440	1,709
Comm. & Business	1975	2.4	3.4	3.5	2.3	13.7	12.1	34.6	36.6	29.2	31.5	15.9	13.3	.7	.8	752	1,922
	1976	2.5	2.8	5.9	2.6	19.0	9.9	29.9	37.5	26.7	31.6	13.8	15.1	1.3	1.4	966	2,320
	1977	2.0	1.9	2.8	3.5	13.3	12.5	29.1	34.2	35.7	31.0	15.2	15.7	1.0	1.2	948	2,746
Nursing	1975	4.4	1.5	1.8	1.1	11.4	6.5	30.8	32.7	37.5	37.5	13.7	19.2	.4	1.5	227	755
	1976	2.4	1.3	2.8	1.5	8.4	6.4	30.4	29.3	41.2	40.8	14.8	19.4	-	1.3	250	777
	1977	2.7	1.1	1.3	2.0	12.7	10.0	30.7	26.7	34.7	39.6	17.9	16.8	-	1.8	150	512
Other Arts	1975	5.8	4.0	3.8	1.8	11.2	9.2	29.2	34.9	33.4	34.6	16.4	14.3	.2	1.2	500	1,460
	1976	5.5	3.0	2.1	2.1	10.9	9.0	31.2	33.6	34.2	37.4	14.2	13.7	1.9	1.2	529	1,406
	1977	4.3	2.5	3.8	1.9	13.8	13.6	34.3	33.2	29.0	36.5	13.7	14.5	.9	.6	531	1,513
Other Science	1975	2.0	1.9	2.9	1.7	12.7	8.1	25.8	26.6	30.4	32.5	21.8	24.8	4.4	4.4	1,026	3,068
	1976	4.3	2.0	4.1	1.9	9.2	8.5	26.3	27.4	28.9	32.8	22.6	23.4	4.6	4.0	931	3,197
	1977	1.6	1.7	3.0	1.9	8.0	8.2	26.8	26.6	30.5	33.6	23.6	24.9	4.5	4.1	930	3,277
Other	1975	53.2	57.2	4.8	4.2	8.1	11.9	11.3	12.5	12.9	7.8	8.1	5.4	1.6	1.0	62	409
	1976	49.4	48.7	3.2	4.3	6.5	11.7	17.2	17.1	16.2	11.4	6.5	6.2	1.0	.6	93	532
	1977	45.0	45.9	7.9	3.1	11.2	15.7	15.7	14.9	13.5	14.3	6.7	4.3	-	1.8	89	509
%	1975	3.9	4.0	3.5	1.8	11.8	8.9	30.3	31.0	30.4	32.4	17.3	19.0	2.8	2.9		
	1976	4.7	3.4	4.1	2.0	11.9	9.3	29.7	31.3	29.9	32.6	17.0	18.6	2.6	2.8		
	1977	2.5	2.8	3.9	2.1	12.0	10.2	30.4	30.4	31.2	32.7	17.4	19.0	2.6	2.8		
Total		N	N	N	N	N	N	N	N	N	N	N	N	N	N		
	1975	428	1,065	387	478	1,289	2,375	3,317	8,287	3,335	[illegible]	1,903	5,079	296	770	10,957	26,706
	1976	516	969	456	562	1,323	2,650	3,289	8,882	3,316	[illegible]	1,881	5,275	284	791	11,065	28,380
	1977	269	793	421	600	1,305	2,891	3,313	8,567	3,397	9,239	1,897	5,372	283	768	10,895	28,221

TABLE III-14

STRIKE BOARDS COMPARED WITH NON-STRIKE BOARDS ON MEANS AND STANDARD DEVIATIONS OF FINAL WEIGHTED AVERAGE MARKS OF UNIVERSITY APPLICANTS BY PROGRAM DESIRED AND YEAR OF APPLICATION

Program Desired	Year of Application	Strike Boards			Non-Strike Boards		
		N	Mean	SD	N	Mean	SD
Arts	Pre-strike	4,518	68.78	10.13	9,372	70.19	9.39
	Strike	4,339	68.82	10.46	10,088	69.64	9.48
	Post-strike	4,574	68.48	10.45	9,915	69.72	9.54
Science	Pre-strike	2,139	72.13	12.12	4,984	74.06	10.55
	Strike	2,134	71.46	12.17	5,171	73.91	10.53
	Post-strike	2,063	71.86	12.21	5,011	73.66	10.83
Engineering	Pre-strike	987	72.59	12.00	2,516	73.79	10.78
	Strike	990	71.78	13.02	2,670	74.52	10.61
	Post-strike	1,004	72.63	12.33	2,660	74.33	10.06
Physical Education	Pre-strike	433	65.09	9.58	1,579	66.47	8.77
	Strike	463	65.62	9.39	1,687	65.81	8.93
	Post-strike	437	65.88	9.30	1,669	66.42	9.17
Commerce & Business	Pre-strike	734	68.78	10.58	1,854	68.84	9.80
	Strike	884	68.19	11.37	2,313	69.25	10.05
	Post-strike	929	69.90	10.49	2,695	69.10	10.47
Nursing	Pre-strike	217	69.92	9.89	744	71.71	8.64
	Strike	244	69.91	10.14	767	71.80	8.96
	Post-strike	146	70.02	9.66	506	71.09	9.57
Other Arts	Pre-strike	471	69.38	10.53	1,401	69.95	9.32
	Strike	500	69.90	9.88	1,364	70.05	9.22
	Post-strike	507	68.30	10.62	1,475	69.86	9.25
Other Sciences	Pre-strike	1,005	71.32	11.78	3,010	72.84	10.55
	Strike	891	71.74	11.98	3,136	72.49	10.38
	Post-strike	915	72.19	11.30	3,221	72.87	10.58
Other	Pre-strike	28	67.00	14.23	176	64.34	13.59
	Strike	46	68.04	10.81	274	65.08	12.43
	Post-strike	49	64.14	11.49	276	65.04	12.02
Programs Combined	Pre-strike	10,532	69.95	11.09	25,636	71.27	10.16
	Strike	10,491	69.76	11.33	27,470	71.01	10.22
	Post-strike	10,624	69.86	11.20	27,428	70.98	10.31

TABLE III-15

THREE-WAY ANALYSIS OF VARIANCE OF FINAL WEIGHTED AVERAGE MARKS OF UNIVERSITY APPLICANTS (1975-77) BY SCHOOL BOARD, YEAR OF APPLICATION AND PROGRAM DESIRED

Source of Variation	d.f.	Mean Square	F	Signif. of F
Main Effects:	11	33,337.727	314.99	.000
School Board Type[1]	1	3,674.475	34.72	.000
Year of Application	2	38.472	.36	.695
Program Desired	8	45,716.313	432.01	.000
Two-way interactions:	26	442.719	4.18	.000
Board type & Year of application	2	17.115	.16	.851
Board Type & Prog. desired	8	976.500	9.23	.000
Prog. Desired & Yr.. of Application	16	226.741	2.14	.005
Three-way Interactions:	16	260.969	2.47	.001
Board Type & Year of Application & Program desired	16	260.969	2.47	.001
Explained	45	11,063.660	104.55	.000
Residual	112129	105.824		
Total	112182	111.001		

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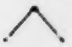
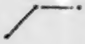
[1] Strike *vs.* non-strike.

CHAPTER 4

SUMMARY OF MAJOR FINDINGS AND CONCLUSION

Our study of changes in the incidence of students dropping out of school and in their reasons for leaving, destinations, plans, etc., and our study of the numbers of secondary school students applying for entry to higher level institutions, actually registering in these programs, and the Grade 13 marks which represented their points in the competition, suggest that the 1975/76 secondary school teachers' strikes in Ontario had the following effects upon students in the affected local systems:

1. In the strike year withdrawal (within the year dropout) rates significantly increased in all grades of the schools of the systems on strike. The highest increases were observed for Grades 12 and 13. The statistics suggest that this development was not part of a general provincial trend; it was not shared by the rest of the province.
2. The general pattern of movement in the dropout rates may be pictured as  --that is, the number of dropouts rose in the strike year and then subsided. The subsidence was not always back to the initial level and in some cases is delayed, so a variation is also evident which might be depicted as . The patterns of change in dropout rates have been grouped into four clear "categories" plus an "other". There is no question but that the distribution of the patterns in the strike boards is statistically significant. The general pattern occurs much more frequently than can be accounted for by chance. Not all boards were equally affected but most show this effect to a marked degree and the strike sample of ten boards (very different in size, geographical location and many other important characteristics) shows this effect. The rest of the province (combined non-strike boards) does not show this effect. Between the pre-strike and strike year the general dropout rate for the rest of the province (combined) and the rate for every grade except Grade 13 dropped. In that grade there was no change.

Since the ten dissimilar boards have only one characteristic in common--that their secondary school teachers were on strike during 1975/76--and their development (in terms of dropout rates) that year was quite counter to that of the rest of the province we feel this is *prima facie* evidence that the development was caused by the strike.

3. There is no evidence to suggest that the strike may have had an impact on the customary distribution of the dropouts by sex.
4. On the other hand there is some evidence that it may have had an impact on the customary dropout rates by grade--that the Grade 13 dropout losses disproportionately rose. The pattern of change in the Grade 13 loss . . was markedly different from the corresponding pattern for the non-strike boards . This differential in impact and the fact that it is Grade 13 students which were adversely affected accords with other evidence of the impact on Grade 13 (see p. 187).
5. There was a significant increase in the incidence of dropout in these systems in the months following their strikes, and in most cases this was of sufficient proportion to upset their common patterns of dropout-by-month. There is no evidence of a comparable shift in the pattern of dropout for the province in 1975/76 but since provincial dropout statistics are not reported as losses-by-month we cannot state unequivocably that only these boards experienced this change in the strike year. What can be said is the following:
    i. The provincial pattern of monthly dropout has been well established by a series of OISE dropout studies which took place over three years from 1972-75. It shows two "peaks"--generally in October and February.
    ii. In the pre-strike year the strike boards all exhibited patterns of loss by month which could be identified as slight variations on the general theme.

iii. In the strike year all these patterns were disrupted to "pile up" the dropouts in the months following the strike.

iv. The change was of such a magnitude that it was exceedingly unlikely to have occurred by chance--that would be to stretch coincidence beyond credence.

In the discussion following the dramatic strike in Metropolitan Toronto, the claim was made that the effects of strikes are short lived. The life of the school is disrupted and students are immediately affected, of course, but they quickly return to normal once the strike is over. Even if this were true, students cannot return to normal unless they are in school. But even in the case of dropouts the effect is probably not of lasting importance provided the student re-enters school the next academic year.

This part of the strike contract was not designed to measure the effects of the disruption of study on the students' achievement and work. However, the following comments can be made on the above claim as to non-effect: (a) The OISE series of dropout studies show that students perceive a disruption of schooling (due to illness, transfer, family crisis) as a justifiable "reason" (or excuse) for leaving school and they offer it frequently as their prime reason--not as frequently as "to take a job" or "hate school" but sufficiently for it to be an identifiable category as a contributory cause. (b) There is considerable "slippage" between dropping out of school during one school year and going back the following Fall. Many good intentions are not realized. (c) There is indirect evidence that only one system (if any) of our strike sample of ten really did recover most of their post-strike dropouts the following September. The indirect evidence is of two types--(1) a historical analysis of the grade survival rates of the enrollment of these systems, and (2) their historical record of re-entry rates. If any system had recovered an unusually large number of dropouts this should have been visible in their 1976/77 enrollment. Such a re-entry seems to have occurred only in one case because in their 1976/77 enrollment we can see an increase beyond the level of 1975/76. We reproduce its historical time series at the end of this section (p. 190).

We do not have a historical file of all re-entries. However, for one of the systems in this strike sample, the dropout lists were provided by means of their admit/demit-by-school computer printout lists. For this system we have three years of September re-entry figures and they show no statistical evidence of an abnormally high re-entry rate in September of the post-strike year. All the strike boards were phoned and only in the system whose enrollment history is reproduced on p. 190 did the schools have the impression, locally, that a massive re-entry recovery had taken place in September, 1976.

On the basis of interview samples from six of the ten strike boards over three years, and using as indicative of general response the 1974/75 interview responses (which represent a 3% overall sample drawn from the dropouts of 26 boards) we find the following:

6. There was no significant change in the strike year in the parents' country of origin, employment/non-employment status, mothers' occupational status, family size, and experience of sibling dropouts.
7. There was a significant change in the strike year in the fathers' occupational status--an increase in the proportion from the highest level (professional and managerial). This is congruent with the finding that the strike year seems to have disproportionately affected Grade 13 and the students whose fathers had attained comparatively higher levels of education.
8. There was a significant change in the strike year in the fathers' level of education--the proportion of students whose fathers had at least one year of secondary or post-secondary education increased disproportionately in the strike year.

9. There was a significant change in the distribution by family income--a decrease in the strike and post-strike years of the higher income group which seems to counteract the findings related to fathers' occupational and educational levels. However, this inconsistency could be due to the unreliable nature of the family income data.

Our general conclusion, then, is that the family characteristics of the interview samples did not change sufficiently over those years to account for all of the significant change(s) we might report in the dropouts' reasons for leaving school, destinations, plans, etc.

10. Economic reasons decreased in importance corresponding to a gain in importance of school related and personal reasons for leaving school. The teachers' strike was the most important single reason in the strike year. Although the introduction of an extra reason category ("strike") in the reasons for dropping out from school in the academic years 1975/76 and 1976/77 caused reduction in the proportionate size of the other reason categories and some shifting in their rank order of importance, these changes were not of sufficient magnitude to be statistically significant.

11. The majority of dropouts were working when they were interviewed and males were over-represented in this group as well as among those who returned to high school.

12. An inverse relationship seems to exist between grade level and the percentage unemployed. In other words, there is an "almost unbroken" progression--the higher the grade left, the greater the proportion of its dropouts who are working. A shift in the distribution of destination categories occurred in the strike year, and in the following year the pattern more or less returned to its former state.

13. There was a noteworthy shift in the employment/unemployment pattern of dropouts over the three years. The percentage of unemployed dropouts

was almost the same for the pre-strike (23.6%) and post-strike (24%) years but reduced in the strike year (to 17.9%).

14. The percentage of fully employed dropouts was highest in the strike year. This seems anomolous, as the employment conditions were unlikely to have changed. Employment is a function of labour market conditions which were not drastically different in the strike year and certainly not likely to have been affected by the strike. However, it seems reasonable to assume that the "employability" of the dropouts changed in the strike year. This finding is congruent with our findings that the dropouts of high socio-economic status (s.e.s.), as indicated by the fathers' occupational and educational attainments, were over-represented in the strike year sample. These students presumably have superior access to jobs by virtue of their fathers' direct control over employment opportunities (the fathers are employers in a loose sense) and through their fathers' network of contacts with other similar "employers". This might have resulted in more employment opportunities and probably better jobs for the high s.e.s. dropouts than were available to dropouts from low s.e.s. backgrounds who normally would have had to seek employment in an "open" market in competition with older and better qualified job seekers.

15. In the strike year the incidence of potential dropouts discussing their plans with their parents significantly increased. The increase was slightly greater for boys than for girls. In the pre-strike year there had been significantly more frequent consultation by girls than by boys.

16. Students who reported that they had not discussed their school leaving plans with their parents were asked, "why not?". In a few cases the students maintained that their parents wanted them to leave or that the parents "didn't care"/"were indifferent". But in all three years the most common response category was "other". In other words, the students were describing idiosyncratic and complicated family and other

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circumstances which made consultation difficult or undesirable. The reasons for not discussing plans with parents were neither related to sex nor to the year the students left school. No real shift occurred in the strike year.

17. Reasons for not discussing school withdrawal with parents were significantly related to students' grade level in the strike year. A shift did occur in the grade distribution of the parental response between 1974/75 and 1975/76 and by the post-strike year it had returned to the pre-strike level. The dropouts reporting parents' being "indifferent" to their plans for leaving school were over-represented among 11th and 12th graders in the strike year.
18. The most common response of parents to the students' consultation with their parents about leaving school is that the students are old enough to make their own decisions. This was true in all years. Relatively fewer parents were disappointed at their children's plans to leave school during the strike year (14.2%) in comparison with the other two. The males were over-represented in this category for the year under study.

Parental disapproval and disappointment at their children's dropping out of schools seems to be lessening. It was not unduly reduced for those who eventually returned to school in the strike year but it did reach significant proportions the year following the strike. Possibly parents are becoming resigned to disruption in their children's schooling and provided the children eventually return to school they now look upon dropping out merely as an episode of minor importance.

19. There was a significant relationship between students' explanations as to why they did not consult their parents before leaving school and their destination (those who resumed full-time study *vs.* the rest). There is little doubt that the distributions changed during the

strike year and became even more skewed than they had previously been. In the pre-strike year, two-thirds of those studying full-time gave parental indifference as the reason for not discussing their plans, as compared to only 18.8% of the rest.

20. For students who return to full-time study neither the student's sex nor the school grade he leaves seem to affect whether school personnel are consulted before the dropout decision is taken. This was true for our sample in all three years under study. The strike seems to have had no effect upon the situation.
21. More than half of the studying dropouts expected to continue their education. This was true for every year under study, but the majority was larger in the strike year than in the others. Males were over-represented in the "further education" category each year; females were consistently over-represented among those planning to get jobs.
22. Most of the dropouts who had not returned to full-time study (by the time they were interviewed) were working and had plans which involved their jobs. This was less true in the strike year than in the others. In 1975/76 a sizeable group reported "other" education plans--i.e., ones which did not involve the secondary school system. In what way these plans were in response to the strike situation we cannot be sure but they do represent an increased rejection of the secondary school as a study milieu.
23. The interviewed sample of dropouts from ten boards who experienced strike in 1975/76 divide fairly evenly as to whether the strike was justified or not. This was true of the cohort from the strike year and opinion had not changed much by the following year. However, a large majority of the 1975/76 dropouts (78.7%) felt that the teachers should have returned to work sooner and this proportion had only dropped slightly the next year (i.e., no opinion change of significant

proportion occurred). The proportion who felt that the government ought to have intervened was also large. It was 78.5% in the strike year and it grew slightly the following year, but not to a significant degree.

24. The majority of the interviewees felt that they did not support the teachers the year that the strike occurred, whereas the majority of the following year felt that they had been on the teachers' side. A shift in opinion had occurred of significant proportion. However, we cannot judge whether this *post hoc* reasoning of the 1976/77 cohort of dropouts is merely the more generous reaction of retrospect or the reflection of the different response of a group which stayed in school over the strike year (and dropped out later) from that of another group which dropped out during the year of the controversy. No serious opinion study was made of students of all school grades in the year of the strike so we have no benchmark data for comparison. The OISE opinion study which was part of this Ministry contract involved only Grade 13 students who entered university in a year following a strike.

The subsequent findings are concerned with the effects of the teachers' strikes on the normal academic transition of the Grade 12 and Grade 13 graduates who sought admission into institutions of post-secondary education in Ontario.

25. For the sample of ten strike boards as a whole, from the pre-strike to the strike year (i.e., from 1974/75 to 1975/76), there was a statistically significant *decrease* in the ratio of Honours Secondary School Graduates to Grade 13 enrollment. But then in the rest of the boards of the province (as a whole) and for the total province there was also a statistically significant decrease in this ratio in the same year. It seems that the reduction is a province-wide trend.

26. For the sample of strike boards as a whole, in the year of the strike there was a substantially significant increase in the ratio of Ontario

scholars (honour graduates with an average of 80+%) to Grade 13 graduates and there was no change in the scholar ratio to Grade 13 enrollment. There was also a significant increase in the (combined) boards of the rest of the province in the ratio of scholars to graduates; thus the direction of change for the strike and non-strike boards was similar except for the ratio of scholars to Grade 13 enrollment which showed a slight downward trend for the latter group. There was a rise in the absolute number of scholars in the strike boards.

27. For the strike sample and for four of the individual boards the ratio of the number of university applicants to Grade 13 enrollment *decreased* significantly in the strike year and decreased again in the post-strike year. For the non-strike boards (as a whole) there was *no change* in the ratio in the strike year. There was a significant reduction in the year following the strike but it was of lesser magnitude than that of the strike group. The ratios were .76, .72, .68 for the latter *vs*. .73, .73 and .71 the former.

28. For the strike sample and for seven of the ten boards there was a *decline* in the ratio of university registrants to university applicants from 1974/75 to the strike year, 1975/76. The decline was statistically significant for the sample as a whole and for two systems; for another system there was a statistically significant increase in the ratio that year. For the rest of Ontario the ratio *increased* significantly in the strike year but decreased significantly the next. For the strike sample, after the significant decrease of the strike year the ratio remained unchanged. The ratios were .72, .69, .69 (strike boards) *vs*. .73, .74, .72 (non-strike boards).

29. The next ratio we checked was that of university registrants to Grade 13 enrollment. This *reduced* steadily for the three years for the strike group as a whole, and each reduction was of statistical significance. The reduction from the pre-strike to the strike year runs

counter to the provincial trend as manifested by the rest of the Ontario boards (combined). For them the ratio *improved* in the strike year and then declined but neither change was statistically significant. The ratios were .54, .50, .47 (strike) *vs.* .53, .54 and .52 (non-strike).

30. Generally, then, we would say that the statistical record provides evidence that the Grade 13 to university transition was adversely affected to a significant degree in the strike boards by the end of the strike year, and the general decreasing trend, which was evident in the province in the post-strike year, was more marked in this group of boards--suggesting that they had probably not really recovered from the disruption. If we can take the pre-strike ratio levels as indicating the norm, then in ratio 1 (applicants to enrollment) the relationship of the strike group to the non-strike group might be expressed as .76 and .73. After the strike it was .68 and .71; ratio 2 (registrants to applicants) had changed from .72 and .73 (1974/75) to .69 and .72 (1976/77) and ratio 3 (registrants to enrollment) from .54 and .53 to .47 and .52.

The drop in applications in the strike year we first explained as follows: students applying for university places from the schools do so on common application forms obtained at their schools in February/ March of their final year. They are in an "applying" milieu; their peers are filling in applications; their teachers (particularly guidance personnel) are helping them complete application forms, choose programs and assess their chances of acceptance. Although the Metro strike was over by the time of application, the schools were not yet functioning normally, and in some of the other boards of our sample the strike occurred in the months of application. This was our initial explanation for the significant reduction in applications but when we received the 1976/77 (post-strike year) figures we discarded it. In any case it would not have accounted for the 1975/76 reduction in the ratio of registrants to applicants. That is more likely to be explained by the adverse competitive position of the Grade 13 students of these boards in the strike year--as evidenced by changes in the means of the average marks of their applicants to certain programs (maths, engineering and science, see pp. 155-160).

That explanation is only acceptable, however, if one accepts the "comparability" of non-standardized teacher assigned Grade 13 marks. Changes in such marks are not an acceptable basis for comparison of student achievement. However, since the marks are used as the main basis for university selection admission decisions, any change in their distribution cannot be ignored. So whether the change in the marks distributions reflects a real decline in achievement is not the question. A reduction in marks does represent, in our opinion, the development of an adverse competitive position--warranted or unwarranted.

31. The same three ratios were calculated for the strike and the non-strike samples and the strike boards individually for these three years, by type of school. It seems to have been students of the academic programs whose transition was disarranged--the first ratio was significantly lower in the strike year, for the collegiates, secondary schools and some of the alternative schools. The second and third ratios also decreased significantly in the strike year for the first two.

32. The comparison of changes in the Grade 13 marks over these three years was made by sex, by the two sets of boards (strike/non-strike) and by the program being sought. Comparison was by ranges of final average marks (weighted--i.e., best of six credits) and by means and standard deviations of the weighted average final marks.

The females' average marks were invariably higher than those of the male applicants. The mean differences in average marks between the sexes were highly significant. The mean differences in average marks among the strike boards were highly significant. But the variance by year of application, in relation to school boards and to sex, was not significant.

33. The percentage distribution, by weighted average final marks of university applicants varied considerably by program but not greatly from one year to another (over this three year period). The mean average marks of the students from the non-strike boards was consistently higher than the means of the applicants from the strike boards. But this was true whatever the year of application. However, when the significance of the variance (in the means of the marks) was assessed by board (strike as a sample *vs.* non-strike rest of the province), year of application (pre-strike, strike and non-strike) and program being sought, then it was possible to judge how much of the marks variance was being contributed by the various factors. The marks difference arising by virtue of the interaction between board category and programs sought was highly significant. The variance introduced by the year of application was not significant. The two-way interactions between (1) the board category and program desired, and (2) program desired and year of application were statistically significant. The three-way interactions among the variables were highly significant.

34. With no standardized measures to be used as benchmarks it is difficult to judge the basis for the changes in teacher assigned marks from year to year, and hence the relationship of any apparent change in achievement in the strike year to the disruption of the strike. However, to compare non-standardized marks with other non-standardized marks, not as measures of achievement but as "points" bearing on a competition, is more defensible. In the selection competition for admission to university programs in Ontario from Ontario Grade 13, marks are of prime

importance. The review of the marks of these years demonstrates that the year of application interacting with the board origin (strike/non-strike) of the applicant and the program being sought does provide the basis for statistically different marks distributions. The year of application alone is not an important variable--the variance produced by the board of the applicant and the program sought is greater. But the year of application added to the other variables interacts to push the variance to levels which cannot be explained by chance. The effect of the year of application is seen when the pattern of change is depicted. For four of the nine broad categories of university programs, the strike year saw a considerable reduction in the marks of applicants from the schools of the affected boards, a reduction which was temporary in that the marks more or less recovered the following year. That this was not a general provincial trend is seen when we compare the marks pattern of these applicants with the marks of students from non-strike boards applying for entry to the same programs in the same three years.
It is reasonable to conclude, therefore, that the average marks of students of strike boards applying for science programs, those in engineering, commerce and business, and in nursing were unduly depressed in the year of the strike and that these students, as a result of the strike, were placed in a disadvantageous competitive position. Applicants for these programs take certain common courses--notably mathematics and physical and biological sciences--so it is reasonable to deduce that these were the subjects adversely affected by the strike disruption. Such a conclusion is congruent with the other findings (dropout rates, transitions ratios) which indicate that the statistically significant "student flow" changes which accompanied the strike year seem to have been concentrated in effects on Grades 13 and 12 (particularly the former), and particularly in the academic type school; and all the effects were adverse--their dropout rates rose unduly, their ratios of

graduates to enrollment were unduly depressed, their ratios of university applicants to the grade enrollment pool fell, their ratios of university registrants to applicants decreased as did also their ratios of registrants to the grade enrollment pools.

Many of the statistically traceable changes in the strike boards' schools were confined to their Grade 13 records, and almost all the changes observed were more serious for that grade than for other grades. The observed statistical changes in student flow, destination and transition in the strike boards generally were adverse; and generally they were not shared by the boards of the rest of the province (combined). So although it cannot be *proved* that these changes were directly "caused" by the strike it is reasonable to consider them as "effects" of the strike. These ten boards are exceedingly different local systems of education. In 1975/76 they shared only one common characteristic not general to other Ontario boards--their school service was disrupted by a strike, the students' school year was abnormal by virtue of that condition.

Secondary School Enrollment by Grade of One System
on Strike in 1975/76

Year	Gr. 9		Gr. 10		Gr. 11		Gr. 12		Gr. 13		Other	Total
1967	2122		1802		1492		1130		385		499	7430
		92.9		88.2		87.2		40.6		6.5		
1968	2314		1971		1589		1301		459		496	8130
		93.0		89.1		90.4		42.8		6.2		
1969	2333		2152		1757		1436		557		514	8749
		101.2		92.4		93.7		45.0		0.0		
1970	2605		2360		1989		1647		646		0	9247
		91.7		87.3		91.7		46.8		0.0		
1971	2646		2390		2060		1824		770		0	9690
		93.4		88.5		83.5		42.2		0.0		
1972	2807		2471		2114		1720		770		0	9882
		89.5		88.1		82.1		44.3		0.0		
1973	2907		2513		2176		1735		762		0	10093
		89.5		88.3		81.1		40.7		0.0		
1974/75	2690		2601		2220		1764		707		0	9982
		93.6		87.7		82.5		40.6		0.0		
1975/76	2631		2517		2282		1831		716		0	9977
		95.2		91.1		84.4		42.2		0.0		
1976/77	2620		2506		2292		1927		772		0	10117

APPENDIX

1975/76 INTERVIEW SCHEDULE FOR SECONDARY SCHOOL DROPOUTS

(For use in the Metro Strike Study)

Department of Educational Planning
OISE

1975/76 SURVEY OF STUDENTS WHO HAVE DROPPED OUT OF METRO SCHOOLS DURING THIS ACADEMIC YEAR

INTERVIEW CARD 1

2-11

____________________ Student's Name

____________________ Date of Interview

Student's I.D. No. ☐☐☐☐☐☐☐☐☐☐☐

____________________ Month the student dropped out of school

Hello, My name is ____________________. I'm a researcher at the Ontario Institute for Studies in Education working on a project which follows students who have dropped out of Metro secondary schools this year. The purpose of the project is to compare this year's dropouts with those who were followed in a big study last year, and also, this time, to ask them a few questions about how they were affected (if they were affected at all) by the Metro Teachers Strike which took place this past year.

Would you mind answering a few questions for us? Any information you give us will be kept completely confidential.

SECTION I

1. First of all, we'd like to have some idea about why you left school. There are probably more reasons than one. Which one is the main one? We'll call that the first one and then you can give me some idea of the others - as many as you feel there are.

Were the reasons:

Employment?	(11)	offered a good job
	(12)	just wanted to work
	(13)	had been working part-time, had chance to work full-time
	(14-19)	Other ______________________________
Financial?	(21)	needed the money to support myself
	(22)	wanted more money to spend
	(23)	family couldn't afford to keep me in school
	(24-29)	Other ______________________________
Dissatisfaction with School?	(31)	lack of freedom-school too restrictive
	(32)	school dull, uninteresting
	(33)	subjects of little value for career
	(34)	not challenging enough
	(35-39)	Other ______________________________
Teachers?	(41)	had trouble getting along with teachers
	(42)	guidance/teacher recommended I leave
	(43-49)	Other ______________________________
Peers?	(51)	kids were immature
	(52)	friends had left to work
	(53-59)	Other ______________________________
Home/Parents?	(61)	unhappy at home - had to leave
	(62)	parent felt he/she was old enough to work
	(63)	parents felt it more important to work
	(64)	parents not interested in what he did
	(65)	needed to care for family
	(66-69)	Other ______________________________
Achievement?	(71)	failing anyway
	(72)	discouraged with school, couldn't keep up
	(73)	courses inappropriate; too difficult to change
	(74-79)	Other ______________________________
Health/Medical?	(81)	unresolved personal problems
	(82)	unable to concentrate
	(83)	sickness
	(84)	accident
	(85)	pregnancy
	(86)	drugs
	(87-89)	Other ______________________________

1st ☐☐ 13

2nd ☐☐ 15

3rd ☐☐ 17

4th ☐☐ 19

The Strike? ______________________________

(Give details) ______________________________

Other?
(91) got married
(92) plan to marry
(93) to travel
(94) suspended/expelled
(95-99) Other ______________________________

2. What are you doing now?

(1) Have returned to high school (GO TO SECTION 2-A)
(2) Studying full-time else where (GO TO SECTION 2-B)
(3) Working (GO TO SECTION 2-C)
(4) Unemployed (GO TO SECTION 2-D)
(5) Other (married, travelling, etc.) What? ____________
(GO TO SECTION 3-B)

☐ 20

RETURNED TO SCHOOL

1. Why did you go back to school?

(1) had never really planned to drop out permanently - just wanted a break. (For this group go to Question 2). ☐ 21
(2) couldn't find a job I liked
(3) couldn't find a steady job
(4) realized I needed more education to get a good paying job
(5) other (elaborate) ____________________ ☐ 22

2. (1) Did the "break" occur after the strike? Yes_____ No_____ ☐ 57
(2) How long did you "stay out"? __________ (months)
(3) Was the "atmosphere" of the school any "different" when you went back to school after the strike? How? Different in what way? ____________________ Yes_____ No_____ ☐ 58
(4) Do you think this was a direct result of the strike? ☐ 59
Yes _____
No _____
Uncertain _____

3. Did you return to the same school or a different school? ☐ 23
(1) Same (GO TO QUESTION 4)
(2) Different (name) ____________________

4. (IF DIFFERENT) Was there any particular reason for your choosing this school over the others? ☐ 24
(Freer atmosphere; offered the courses I wanted; friends go there; better extra-curricular activities)
(elaborate)

5. Did you make any significant changes in your program of study? ☐ 25
(1) Yes (elaborate) ____________________
(2) No

6. Are you satisfied with school this year? ☐ 26
(1) very satisfied } (GO TO QUESTION 6)
(2) satisfied }
(3) uncertain }
(4) dissatisfied } (GO TO QUESTION 7)
(5) very dissatisfied }

7. (IF SATISFIED) Are you planning to complete your program? ☐ 27

   (1) Yes
   (2) No

8. (IF DISSATISFIED) Are you thinking of dropping out again? ☐ 28

   (1) Yes
   (2) No
   (elaborate)

GO TO SECTION 3-A

SECTION 2-B

STUDENT IS ATTENDING EDUCATIONAL INSTITUTION OTHER THAN HIGH SCHOOL

1. What type of school are you attending?

Is it a (1) University (name) ______________________
(2) Community College (name) ______________________
(3) Business School (name) ______________________
(4) Trade School (name) ______________________
(5) Nursing School (name) ______________________
(6) Other ______________________

☐ 29

2. Did the strike have anything to do with your decision to go there?

(1) Yes ______
(2) No ______

Explain ______________________

☐

3. When did you first inquire about going there?

(1) Before you dropped out of school
(2) After (GO TO QUESTION 4)

☐ 30

4. (IF BEFORE) Did you receive any help from your school guidance counsellor or a teacher?

(1) Yes (who?) ______________________
(2) No

(elaborate: how? was it initiated by you or him/her)

☐ 31
☐ 32

5. How did you first contact the school?

(1) Wrote and applied
(2) Talked to someone at the school
(3) Other (elaborate) ______________________

☐ 33

6. Could you describe what kind of program you're taking? (What are the major courses?) ______________________

☐☐ 35

7. Are you studying any subjects now which you could have taken at high school?

(1) Yes (what?) ______________________
(2) No

☐☐ 37

8. Do you have to pay fees? ☐ 38

(1) Yes (how much?) ________________________
(2) No (GO TO QUESTION 9)

☐☐☐☐ 42

9. How are you paying them?

(1) Parents paid fees, board at home
(2) Worked and saved over summer
(3) Worked part-time
(4) Working part-time now
(5) Made a loan
(6) Other (elaborate) ________________________

☐ 43

10. How would you compare the learning atmosphere with that of high school? Which is more conducive to learning?

(1) This school much better
(2) This school somewhat better
(3) Uncertain
(4) High School somewhat better
(5) High School much better

☐ 44

11. Are you planning to complete your program?

(1) Yes
(2) No (GO TO QUESTION 13)

☐ 45

12. How long will it take you to complete it? ☐☐ 47

____

13. (IF NO) why not?

(1) Too great a financial burden
(2) Finding it difficult to keep up-courses too difficult
(3) Finding it difficult to keep up-working too
(4) Want to work
(5) Just generally dissatisfied with schooling
(6) Other (elaborate) ________________________

☐ 48

GO TO SECTION 3-A

SECTION 2-C

WORKING

1. Could you describe the kind of job you're doing now? (describe duties) ☐☐☐ 51

2. Did you have the job before you left school?

Interviewer
Student may give more than one answer here.

(1) Yes
(2) No, but shortly after ☐ 52
(3) No, looked a long time (________months)
(4) No, had other jobs before this one (how many?_____) ☐ 53
(5) No, I got it during the strike.

3. How long have you had your present job? ☐☐ 55

____________months

4. How did you get it?

(1) Through a manpower agency
(2) Registered with employment agency
(3) Answered an ad
(4) With help of guidance counsellor or teacher ☐ 56
(5) Through a friend
(6) Other (describe)______________________________________

5.(1) Do you mind telling me how much you earn each week, before deductions?

You can round it if you wish ($75-100, $100-125, $125-150 etc.)

_______________ ☐☐☐☐☐ 61

(2) For those who got their jobs during the strike:
(a) Was the salary you earned a strong factor in making you decide not to go back to school after the strike? Yes_____ No_____ ☐
(b) How much would you say you earned during the strike? (Total altogether, round it if you wish). $___________________

6. Considering your ability and education, do you think you're employed at your proper status? That is, do you feel you're over-employed? Underemployed?

(1) Very over-employed
(2) Over-employed
(3) Uncertain
(4) Under-employed
(5) Very under-employed

7. How useful do you think your high school education was in preparing you for your job?

(1) Very useful
(2) Useful
(3) Uncertain
(4) Not very useful
(5) Not useful at all

SECTION 2-C

8. Could you suggest any additional or different education programs at high school that would have helped to better prepare you for work? (elaborate)

GO TO SECTION 3-B

SECTION 2-D

UNEMPLOYED

1. Are you looking for a job now? ☐ 66
   - (1) Yes
   - (2) No (GO TO QUESTION 3)

2. (IF YES) How long have you been looking? ☐☐ 68

   ________ months

3. Have you worked at all since leaving school? ☐ 69
   - (1) Yes
   - (2) No (GO TO QUESTION 9)
   - (3) Note whether they worked during the strike if they left school during that time. ____________(✓)

4. (IF YES) How many jobs have you had? ________________ ☐ 70

5. Could you describe your last job? ☐☐☐ 73

   (details)

6. How long did you work at your last job? ☐☐ 75

   __________months

CARD ☐ 1

7. Why did you leave? ☐ 2
   - (1) Laid off
   - (2) Fired
   - (3) Didn't like type of work
   - (4) Didn't like working conditions
   - (5) Other (Specify)______________________________

8. a Could you tell me how much money were you earing each week, before deductions? (Round if you wish: $75-100, $100-125, $125-150 etc.)

   ________________ ☐☐☐☐ 6

   b Could you tell me how much you were earning during the strike?

   $ ________________

9. Are you drawing unemployment insurance? ☐☐ 8
   - (1) Yes (how long) ____________________months
   - (2) No

10. What do you figure your chances are in getting a job soon?

(1) Very good
(2) Good
(3) Fair
(4) Poor

☐ 9

11. Do you feel that your unfinished high school education has prevented you from getting a good job?

(1) Yes
(2) No
(elaborate)

☐ 10

GO TO SECTION 3-B

SECTION 3-A

STUDYING FULL-TIME - PARENTAL ATTITUDES AND PEER GROUP INFLUENCE

Now we'd like to ask you a few questions about how your family and friends felt about your leaving school. Even though you are now at school full-time, we would like to get a better idea of how they felt at the time you decided to leave.

1. Did you discuss your plans to leave school with your parents?

(1) Yes
(2) No (GO TO QUESTION 3) ☐ 11

2. (IF YES) What was their reaction?

(1) Approval - they encouraged me to leave - felt I made the right decision
(2) Said I was old enough to decide for myself
(3) No reaction - neutral ☐ 12
(4) They were disappointed
(5) They were strongly opposed to my leaving
(6) Other____

3. (IF NO) Why not?

(1) Parents always wanted me to leave anyway
(2) They were indifferent to my schooling ☐ 13
(3) I make my own decisions
(4) I can't talk to my parents/guardian about anything
(5) Other____

4. Did the strike, or the effect of the strike, have any part in that discussion? **Yes**_____ **No**______

If yes, what? ____
____

5. Was the importance of schooling stressed by your parents while you were growing up? ☐ 14

(1) Yes
(2) No

6. How did your parents/guardian feel when you returned to school?

(1) They were very happy ☐ 15
(2) They were neutral
(3) They were unhappy
(4) I don't know
(5) Other____

SECTION 3-A

7. Did anyone at your school have any influence in your deciding to leave school? ☐ 16

   (1) Yes (who?____________________ what?____________________)
   (2) No ☐ 17

8. Did your friends have any influence over your decision to leave? ☐ 18

   (1) Yes (what?)____ ☐ 19
   (2) No

9. Did they have any influence over your decision to return? ☐ 20

   (1) Yes (what?)____
   (2) No ☐ 21

10. What are most of your friends doing now?

   (1) Working
   (2) Some working, some unemployed ☐ 22
   (3) At school
   (4) Other____

GO TO SECTION 4-A

SECTION 3-B

WORKING, UNEMPLOYED, OTHER - PARENTAL ATTITUDES AND PEER GROUP INFLUENCE

Now we'd like to ask you a few questions about how your family and friends felt about your leaving school, just to get some idea of how they felt at the time you decided to leave.

1. Did you discuss your plans to leave school with your parents?

(1) Yes
(2) No (GO TO QUESTION 3)

☐ 23

2. (IF YES) what was their reaction?

(1) Approval - they encouraged me to leave - felt I made right decision
(2) Said I was old enough to decide for myself
(3) No reaction - neutral
(4) They were disappointed
(5) They were strongly opposed to my leaving
(6) Other_______________________________

☐ 24

GO TO QUESTION 4

3. (IF NO) Why not?

(1) Parents always wanted me to leave school
(2) They were indifferent to my schooling
(3) Other_______________________________

☐ 25

4. Did the strike, or the effect of the strike, have any part in that discussion? Yes______ No______

If yes, what? _______________________________

____

5. Was the importance of schooling stressed by your parents while you were growing up?

(1) Yes
(2) No

☐ 26

6. How do your parents feel now that you have left school?

(1) They are pleased
(2) They are resigned
(3) They still want me to return
(4) I don't know how they really feel - we don't talk
(5) Other_______________________________

☐ 27

7. Did you discuss your leaving with anyone at your school? ☐ 28

(1) Yes (who? Teacher, guidance counsellor, principal)

(2) No (GO TO QUESTION 9)

8.(IF YES) Did this person try to encourage you to stay in school? ☐ 29

(1) Yes
(2) No, felt it would be better for me to leave
(3) Other____

GO TO QUESTION 10

9.(IF NO) Why didn't you? ☐ 30

(1) School personnel just are not interested in kids
(2) Felt it would be wast of time. I'd made up my mind to leave
(3) Never got along with teachers and others - that's why I was leaving
(4) Other____
(5) I left during the strike there weren't any teachers to consult.

10.Did your close friends have any influence over your decision to leave? ☐ 31

(1) Yes (what?)__________________________________ ☐ 32
(2) No

11.Did you leave school because your friends were leaving? ☐ 33

(1) Yes
(2) No

12.What are most of your friends doing now? ☐ 34

(1) All are working
(2) Most are working or looking for work
(3) Most are still in school
(4) Other____

(GO TO SECTION 4-B)

SECTION 4-A

STUDYING FULL-TIME - FUTURE PLANS

1. If you had the power to change the present secondary school system in any way, what changes would you make? (Different courses, better guidance, better school atmosphere, rules, teaching, etc.)

   (elaborate)

☐☐ 36

2. Have you made any plans beyond completion of your present study?

☐ 37

(1) Further education (what?________________________________
(2) Plan to get a job right away (what?________________________________
(3) Plan to get married
(4) Plan to take time off for travel
(5) Other____

☐☐ 39

GO TO SECTION 5

SECTION 4-B

WORKING, UNEMPLOYED, OTHER - FUTURE PLANS

1. Generally speaking, how satisfied are you with what you are doing now?

   (1) Very satisfied ☐ 40
   (2) Satisfied
   (3) Uncertain
   (4) Dissatisfied
   (5) Very dissatisfied

2. Do you have any regrets about leaving school when you did?

   (1) Yes (explain) ☐ 41
   (2) No ☐ 42

3. Do you have any plans to return to secondary school sometime in the future? ☐ 43

   (1) Yes (when?)____
   (2) No

4. How important do you think it is, for your career plans, to get a secondary school graduation diploma?

   (1) Very important ☐ 44
   (2) Fairly important
   (3) Uncertain
   (4) Fairly unimportant
   (5) Not important at all

5. Would you like to be able to finish high school if you could do it on a part-time basis (say on weekends, at summer school, by correspondence, at night school?) ☐ 45

   (1) Yes
   (2) No

6. Are you participating in any part-time study now? ☐ 46

   (1) Yes (Describe) ☐ 47

   (2) No (GO TO QUESTION 8)

7. (IF YES) Are you paying fees? ☐ 48

   (1) Yes (how much?) _________ ☐☐☐☐ 52
   (2) No

(GO TO QUESTION 9)

8. (IF NO) Do you have any future plans for part-time study? ☐ 53

(1) Yes (describe) ☐ 54

(2) No

9. Do you think that part-time education should be free, as is some full-time education (i.e., high school) ☐ 55

(1) Yes
(2) No (why not?) (GO TO QUESTION 11)

10. (IF YES) Who do you think should pay for your education?

(1) The school board
(2) The provincial or federal government ☐ 56
(3) The municipality
(4) Employers
(5) Other (specify)

11. Have you made any other plans beyond what you are presently doing?

(1) Stay at present job
(2) Find better job (what?) ________________________
(3) Plan to get married ☐ 57
(4) Plan to return to high school full-time to complete program
(5) Other education plans (what?) ____________________ ☐ 58
(6) Travel
(7) Other (what?) ________________________________

12. Finally, if you had the power to change the present school system in any way, what changes would you make? (different courses, better guidance, better school atmosphere, rules, teaching, etc.). ☐☐ 60

(GO TO SECTION 5)

☐

☐☐☐☐☐☐☐☐☐☐ 2-11

FAMILY BACKGROUND

Now, in order to place your replies in perspective we'd like to know a bit more about your family background. If you don't wish to answer any of these personal questions just say so, and we'll skip them.

1. Are both your mother and father living?

(1) Yes
(2) Mother is dead ☐ 12
(3) Father is dead
(4) No, both are dead

2. Do you live at home with them (him, her)?

(1) Yes
(2) With mother only ☐ 13
(3) With father only
(4) No (If no, determine whether student lives alone
or whether he lives with some other person(s))

3. Is (WAS IF DEAD) your father Canadian born?

(1) Yes ☐ 14
(2) No

4. (IF NO) what country does (DID) he come from?

(1) United States
(2) Great Britain
(3) Ireland ☐ 15
(4) France
(5) Germany
(6) Italy
(7) Other European Country (Specify) ____________________
(8) Other (specify) ________________________________ ☐ 16

5. Is (WAS IF DEAD) your mother Canadian born?

(1) Yes ☐ 17
(2) No

6. (IF NO) What country does (DID) she come from?

(1) United States
(2) Great Britain
(3) Ireland
(4) France ☐ 18
(5) Germany
(6) Italy
(7) Other European Country (Specify) ________________
(8) Other (Specify) ________________ ☐ 19

7. What language or languages do you speak at home?

(1) English
(2) French ☐ 20
(3) German
(4) Italian
(5) Other European (Specify) ________________
(6) Other (Specify) ________________ ☐ 21

IF BOTH PARENTS ALIVE, DO SECTIONS 6 AND 7

IF ONLY FATHER ALIVE, DO SECTION 6, SKIP SECTION 7

IF ONLY MOTHER ALIVE, SKIP SECTION 6, DO SECTION 7

SECTION 6

FATHER'S BACKGROUND (IF ALIVE)

Now we'd like a little more information about your father.

1. What was the highest grade he completed?

(01) No formal schooling
(02) Grade 1 to Grade 3
(03) Grade 4 to Grade 6
(04) Grade 7 or Grade 8
(05) Grade 9
(06) Grade 10
(07) Grade 11
(08) Grade 12
(09) Grade 13
(10) 1 or 2 years University
(11) 3 or 4 years University
(12) University graduate school
(13) Other non-university but post-secondary

☐☐ 22,23

2. Has he had any other formal education or training that we haven't covered?

(1) Yes
(Brief description)

☐ 24

☐ 25

(2) No

3. Is your father working now?

(1) Yes (GO TO QUESTION 4)
(2) No (GO TO QUESTION 5)

☐ 26

4. (IF YES) what kind of work does he do?

(Brief description)

☐☐☐ 27-29

5. (IF NO) Is he: (1) On pension
(2) Unemployed, looking for work
(3) Unemployed - just staying around the house ☐ 30
(4) Drawing unemployment insurance
(5) On welfare
(6) Incapacitated
(7) Other (Specify) ______________________ ☐ 31

IF MOTHER ALIVE, GO TO SECTION 7.

IF MOTHER DEAD, GO TO SECTION 8

SECTION 7

MOTHER'S BACKGROUND (IF ALIVE)

Now, a few more questions about your mother.

1. What was the highest grade she completed?

(01) No formal schooling
(02) Grade 1 to Grade 3
(03) Grade 4 to Grade 6
(04) Grade 7 or Grade 8
(05) Grade 9
(06) Grade 10
(07) Grade 11
(08) Grade 12
(09) Grade 13
(10) 1 or 2 years University
(11) 3 or 4 years University
(12) University graduate school
(13) Other university but post-secondary

☐☐ 32,33

2. Has she had any other formal education or training that we haven't covered?

(1) Yes
(Brief description)

☐ 34

☐ 35

(2) No

3. Is your mother working now?

(1) Yes (GO TO QUESTION 4)
(2) No (GO TO QUESTION 5)

☐ 36

4. (IF YES) what kind of work does she do?

(Brief description)

☐☐☐ 37-39

5. (IF NO) Is she: (1) On pension
(2) Unemployed, looking for work
(3) Unemployed, just staying at home
(4) Drawing unemployment insurance
(5) On welfare
(6) Incapacitated
(7) Other (Specify) ____________________

☐ 40

☐ 41

6. (IF NO) Has she ever worked?

(1) Yes
(2) No

☐ 42

What did she do?

(Brief description)

☐ 43-45

GO TO SECTION 8

SECTION 8

SIBLINGS

OK now, just a few more questions about your home.

1. Do you have any brothers or sisters? ☐ 46

   (1) Yes
   (2) No (GO TO SECTION 9)

2. (IF YES) How many do you have? ________ ☐ 47

3. Where do you stand in the family? Are you ☐ 48

   (1) the eldest
   (2) in the middle
   (3) the youngest

4. How many of them live at home? _______ ☐ 49

5. Have any of them dropped out of school? ☐ 50

   (1) Yes
   (2) No

GO TO SECTION 9

SECTION 9

FAMILY INCOME

Finally, we'd like to have some idea how well-off your family is (was) in economic terms. For instance, considering your parents' (mother's, father's) income, we would like to determine an appropriate family income category - ie., income taken altogether, all the money going into your home. Would it be easiest to express this income by the week, by the month or by the year? ____________________

I'll read a few categories and perhaps you could tell me the appropriate one __________

Weekly:
(1) Under $125
(2) $125 - 150
(3) $150 - 175
(4) $175 - 200
(5) $200 - 225
(6) $225 - 250

What _______

☐ 51

52-56

☐☐☐☐☐

Monthly:
(1) Under $500
(2) $500 - 600
(3) $600 - 700
(4) $700 - 800
(5) $800 - 900
(6) $900 - 1,000

What _______

Annually:
(1) Under $6000
(2) 6000 - 7200
(3) 7200 - 8400
(4) 8400 - 9600
(5) 9600 - 10,800
(6) 10,800 - 12,000

What _______

GO TO SECTION 10

Now one final question.

What do you think about the Metro Teachers Strike which occurred this academic year. For instance, do you think they were justified? Yes_____ No_____

Do you think they should have gone back sooner? Yes_____ No_____

Should the government have intervened sooner? Yes_____ No_____

What?____

____

By and large would you say you were on their side? Yes_____ No_____

TO END INTERVIEW

Well, thats it. Thank you very much ______________________________, for your help in answering these questions. Is there anything else you would like to comment on, or any questions you'd like to ask?

(ALLOW TIME FOR RESPONSE)

Thank you again. Good bye.